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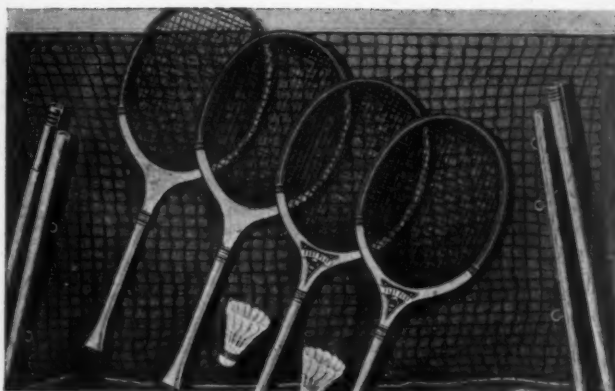
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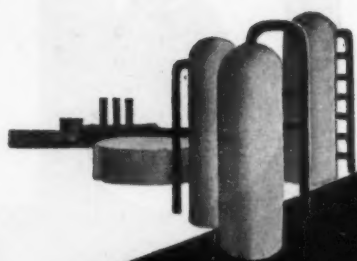
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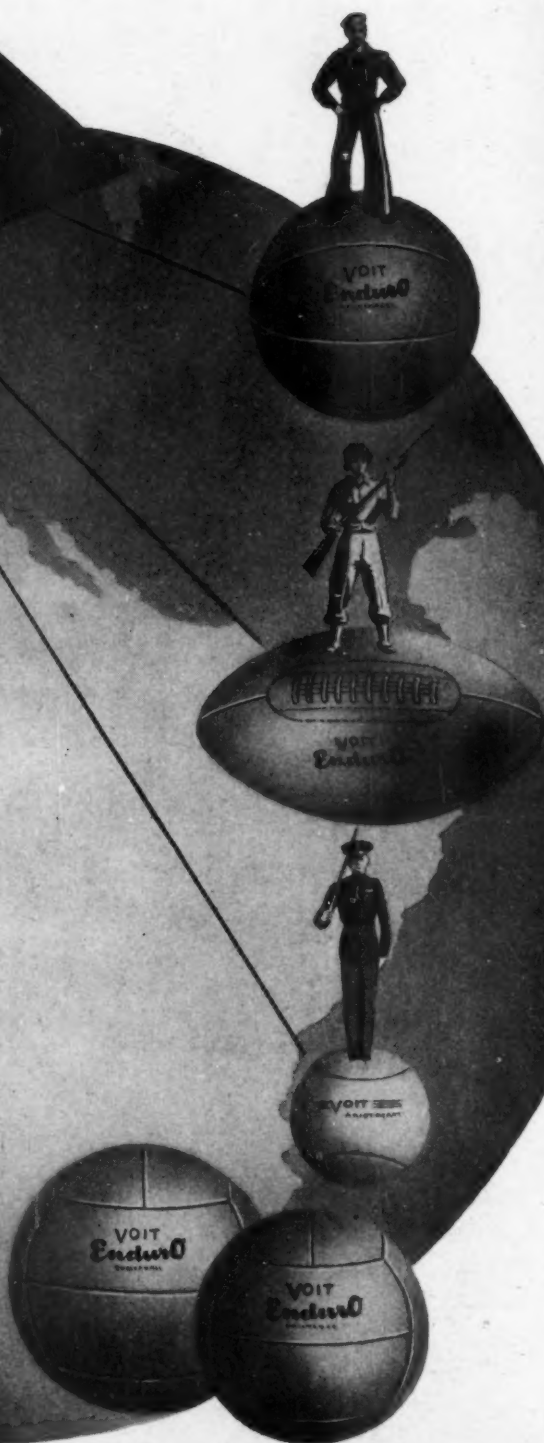
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Here Below

IF YOU ask us what's brewing these days, we'll say T. Everywhere you look, you see high schools and colleges ladling out strong potions of it.

One thing is certain: The T formation can't be palmed off as a novelty anymore. When Notre Dame and Army start forsaking traditional modes of attack for the T—you can be sure the T is no fly-by-night affair.

We're just wondering whether the success of the T isn't due in part to a lack of imagination in defensive planning. In the saga of every offense, there is always a period when nothing appears able to stop it.

Then comes a second stage, in which the defense catches up. The third stage is individual offensive variations, and the fourth stage is individual defensive variations. Thus the pendulum swings back and forth.

The T formation, it would appear, is in the third stage. The first was the T proper. The second was the defense which stopped it so cold that the T was discarded for years. The third stage was set by Shaughnessy, Jones and Halas with their variation—the man-in-motion.

Now the football world is waiting for the fourth stage—the defensive variation. It took imagination to invent the man-in-motion. It will take imagination to stop him.

LOU LITTLE, who yields nothing to anyone in the way of artfulness, rigged up a neat defense last month which enabled his weak Columbia team to check the Army T panzers for a half.

He figured that the T addicts ran their man-in-motion to lure the defense's key man away to the outskirts. He declined to fall for this. He also reckoned that the T's running plays are designed to capitalize on quick openings. Therefore he declined to provide any.

He set up a six-man line: tackles

directly opposite ends, guards opposite guards, and backers-up behind tackles. *The whole line was pulled back a foot and a half* on the theory that if the Army line-men had to take a step before making contact they would be unable to split the Columbia line and make the openings on which the T attack largely depends.

No Columbia player followed the man-in-motion to the sidelines. The threatened *halfback* merely moved out a little and the end played outside. The backer-up didn't move. The Army, of course, wanted him out there with the man-in-motion.

ANOTHER ingenious piece of planning also went to waste the following week when Army poured its hot T over a tepid Yale team. The Eli coach, Howie Odell, came up with a defense which Army had to pass over because it was so hard to run through.

Yale lined up in a 6-3-2 and shifted all three backers-up in the direction of the man-in-motion. The end on the unthreatened side then would drop off to replace the weak-side backer-up, thus making the formation a 5-4-2.

The Little and Odell formulas were both bold, imaginative pieces of planning—the earmark of thinking coaches. We'd like to see them given a fair test by coaches with respectable manpower.

REVIEWING a new Barnes book the other day, we came across a neat little essay on the back cover of the jacket, entitled, "Sport Is Proving Itself", which offered a fresh, down-to-earth slant on the value of sport in wartime.

"No one nation—no one people of any nation—has a corner on courage, strength, endurance, intelligence—the qualities of wartime heroism. Nor does 'will-to-win' belong more to the men of either side than to their foes.

"Some of us may have been guilty of making such claims on behalf of the American heritage of sport, as we sought during the first few months of war to assure continuance of competitive athletics in wartime. But the guilt is easily explained.

"We know the sport-loving and sport-playing American youths were the world's best competitors. We knew the spirit of competition was so much a part of the boy who swung a bat, carried a football, or blocked a shot at the basket—even the boy who merely looked on from the sidelines. That competitive spirit was natural to the American fighting man because it was not forced upon him. He grew up with in on gridiron, court and diamond.

"What we did not know was how to say these things in the terminology of modern warfare. Today the words are being written for us by our armed forces all over the world. Teamwork and individual initiative are sweeping before them the well-drilled but unimaginative legions of destruction.

"Split-vision pilots are out-flying suicidal Japs and clear-thinking tank-busters are outmaneuvering Nazi efficiency. The lessons learned amid the mock seriousness of athletic combat are being put to deadly purpose on land, sea, and in the air against those who would forever end the privilege of sport for sport's sake."

HAVE you noticed how the Army keeps toughening its training program? They're never completely satisfied with it. They're always working on it. So, if our boys are tougher—physically and psychologically—than they were a year ago, it is no accident.

Take a look at the physical conditioning program at Fort Jackson, S. C., for example. It is so tough that *officers and men over 40 are excused from its more rigorous phases!* It consists of a battery of tests guaranteed to make one large callous of the body.

First is a pushup from a prone position; this is repeated as many times as the man can do it. He then runs 300 yards over level but rough terrain in 45 seconds. Without resting, he does burpees (knee-bends and extending the legs, resting the weight on the arms), carries a man of his own weight on his back while he runs 75 yards, and then runs, crawls, creeps and jumps over a 75-yard zigzag course.

Immediately following which, he must march with the unit in full field equipment four miles in 50 minutes!



Essential wartime needs account for a large part of our textile output. Until normal production can be resumed, we cannot overstate the importance of making existing athletic uniforms last. Take good care—for longer wear.

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SCHOLASTIC COACH

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Editor: OWEN REED

Assistant Editor: H. L. MASIN

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From Coaching School Notebooks

Everett Shelton

Reported by Will L. Clegg
Salt Lake City Public Schools

"EVERYTHING a college team does can be done by a high school team," averred Everett Shelton at the 19th Annual Coaching School at Logan, Utah, in detailing the intricacies of the weave with which his University of Wyoming quintet captured the national collegiate championship last season.

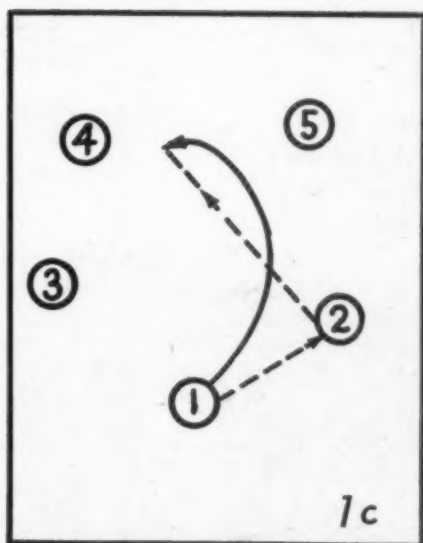
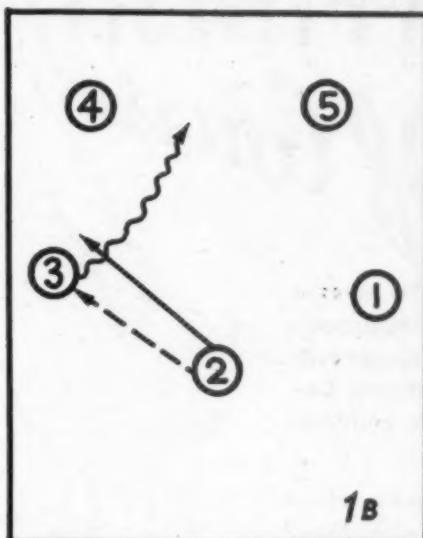
The Cowboy coach diagrammed and demonstrated his favorite maneuvers, with variations to meet different defenses and to adjust to individual differences in personnel.

From a three-out, two-in set-up, the Cowboys go into "a front-line weave, with about eight basic movements. When we pass we form a screen, the man receiving the ball staying put until the ball reaches him." Pass and screen is the motto.

In **Diag. 1a**, the first step of the 3-on-3 weave, 1 passes to 2 and screens for him; 2 waits for the ball, then drives over the heels of 1 with a dribble. The dribbler goes in for a shot or passes to 4.

If completely bottled, 2 dribbles to the position formerly occupied by 1, and initiates the same play to the left, as in **Diag. 1b**.

When the defense switches, the Cowboys vary their tactics; but they stick to the basic pattern. **Diag. 1c** shows 1 going in on a slow screen



and buttonhooking in toward the basket for a pass from 2. Shelton calls this maneuver his "False Screen." No. 1 may take the pass over his right shoulder, instead of making a complete turn as shown.

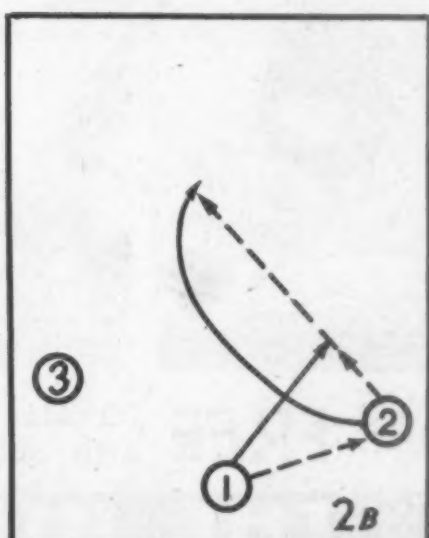
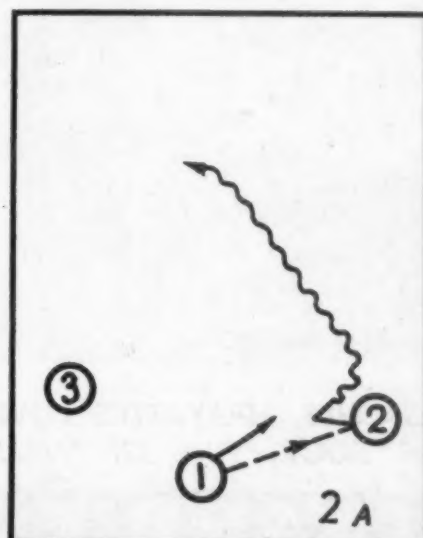
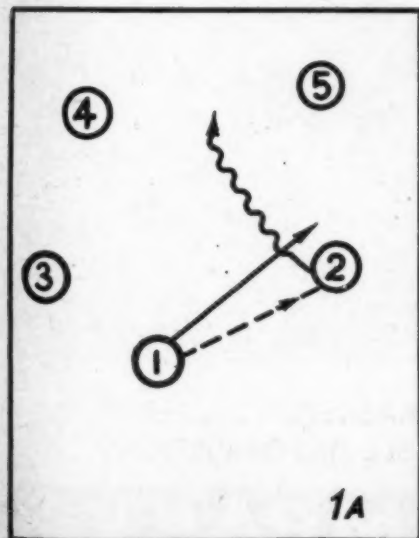
Diags. 2a and 2b illustrate tactics against a switching defense. In the "Fake and Drive In" (**Diag. 2a**), 2 fakes his drive inside, then dribbles outside. In the "Double Pass" (**Diag. 2b**), 2 returns the pass to 1, and cuts inside for a return pass under the goal. No. 1 may also fake a pass to 3 and drive outside to the basket.

Diag. 3 outlines a pet Shelton maneuver, the "Give Up on the Front Line." No. 1 passes to 2 and cuts away from the ball (the only time a Cowboy passer moves in the opposite direction) to screen for 3. No. 2 then passes to 3.

In his "Give Up on the Back Line" (**Diag. 4**), Shelton pointed out that 1 passes to 2 and drives in to screen on the back line for 4 (may also pass to 3 and screen for 5). No. 2 then dribbles toward the center and passes to 3, who whips the ball to 4. The play is equally effective from the other side.

A development of this play is shown in **Diag. 5**, the "Give Up on the Back Line Double Screen." After passing to 3, No. 2 drives in

(Continued on page 36)



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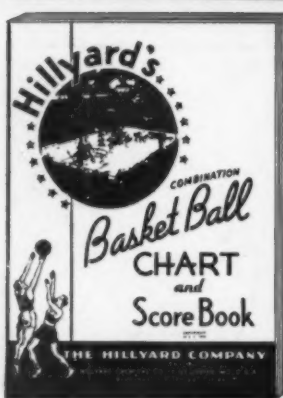
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CENTER PLAY FROM THE FLOOR UP

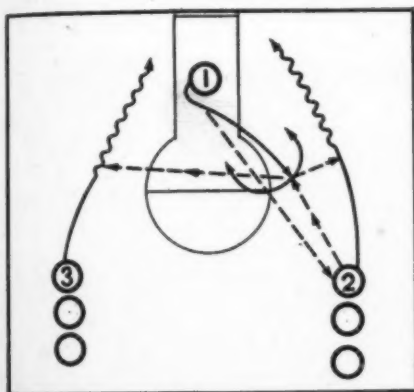
By Floyd H. Baker

Floyd H. Baker is the hugely successful basketball coach of Martins Ferry, Ohio, High School. He also directs the department of physical and health education and is secretary of the Ohio Valley Board of Approved Football Officials.

HAVE you ever seen a great basketball team without a great center? Let your memory dwell on the championship teams in your district and see if it isn't true that they were all built around outstanding centers.

During the past ten years, the Ohio state "A" winners have always cropped up with the all-state pivot. My own teams have won six of the last eight district titles and in seven of these eight years I owned the all-district center.

The term "hub" has been applied to the center and it fits well. For a quintet without a good center is like



Diag. 1

a wheel without a hub. There is nothing to connect the other players or "spokes."

Good centers, like most of the good things in life, are hard to find and harder to develop. At Martins Ferry, we start looking for centers in the fifth and sixth grade leagues, giving preference to tall boys regardless of how unpromising, awkward or inept they may seem. The smaller players may look better at a corresponding stage in their development, but we take the long range view.

From personal experience, I have found that coaching a center takes as much time and more care than the tutoring of the four other men. For, on occasions, your tall boy plays as a forward and a guard as well as a center. When control of the rebounds is at stake, a good tall utility pivot may always be slipped into the game as a forward or guard.

In choosing a center, I look for four things and hope for a fifth. In their order of importance I look for height, floor ability, rebound ability, ball-handling, and, lastly, shooting ability. An even temperament is a sixth important requisite, for the pivot takes a terrific body beating, both legally and otherwise. If he can't take it, he soon loses his temper and with it his effectiveness.

I like a boy over six feet because if he's any shorter an extra tall opponent will have too great an advantage on rebounds and overhead shots. Along with height, stamina and physical strength must be included. There are two types of tall centers; the tall, slender, wiry type and the shorter, powerful, rugged type. Both are capable of first-class play when coached well and used to the greatest advantage.

Floormanship is possibly the most difficult skill to teach and usually the most difficult to learn. We teach a forcing type of defense and offense, starting in our grade schools. We ask the center to play like a forward or guard, which he is on many occasions due to switches.

During his earlier stages the young center looks very bad in the midcourt against small, fast men. But in time he learns to play them loose and keep them to the outside. By his junior year, he handles them with ease.

Against the skyscraper opponent who parks under each basket because he can't play the floor, he will have a picnic. If the immobile giant tries to follow him, he will soon wear him out. Floor play builds up the center's stamina, agility and confidence. It proves to him that he can play any type or size player. The average big boy is led into believing he must be matched with a player like himself before he should try to play the floor.

To build the center's floor game, we have a drill called "keep-away" in which the ball is tossed up between the two centers as at the start of a game. The team gaining control must take the ball into its frontcourt and there retain possession without scoring. A held ball, a foul or a violation loses the ball to the opponents who, in turn, must advance to its front court.

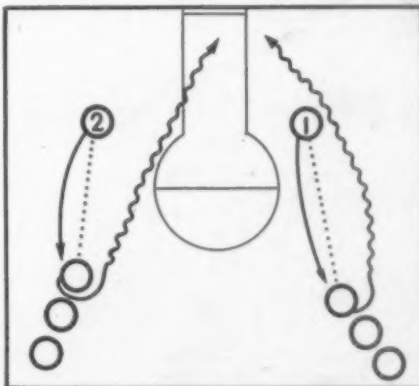
We usually run the drill for five minutes, timing it with a stopwatch. The team maintaining control the

In developing your big man, teach him everything you teach the other players

longer is adjudged the winner. This gives the center practice in offensive and defensive floor play without parking him under the basket as a more or less stationary rebounder.

A good ball-handling drill is shown in **Diag. 1**. The center starts the drill by tossing the ball against the board; he recovers the rebound and passes to the closest 2 or 3 man, following his pass to the side of the foul circle where he receives a return pass. He then feeds to either of the two cutters or takes a shot himself.

The cutters stay in and rebound the ball until it is goaled. They then go to the ends of the opposite lines, and the drill continues. This drill gives the center invaluable practice in rebounding, passing out accurately, meeting incoming passes,



Diag. 2

"hitting" cutters driving in at full speed, and shooting off the pivot.

The drill in **Diag. 2** affords practice opportunities in pivoting, footwork, dribbling, and shooting on drive-in shots. In this drill, 1 or 2 rolls the ball to the next man and then charges him, necessitating a quick pick up, pivot and drive in for a shot. The roller is instructed to run into the receiver if he doesn't pivot out of his way. The shooter follows up his shot and continues the drill.

Many coaches look first for rebound ability in a center. And with some justification, considering the fact that three out of four tries at the basket end up as free balls.

The player delegated to rebound duty must follow in and recover the ball. He should turn with the shot and concentrate on the flight,

(Continued on page 40)

THE PHYSIOLOGY OF FITNESS

By Dr. Thomas K. Cureton

This is the third of a series of articles on physical fitness, and the first of two installments on exercises for developing endurance and flexibility, by the distinguished physical educator and author, Dr. Thomas K. Cureton, who is associate professor of physical education at the University of Illinois. His first two articles, in September and October, covered classification tests.

PHYSICAL Fitness is usually associated with *stamina* (or endurance) in the minds of most people. While there are several types of endurance or, conversely, fatigue, this article deals with dynamic types of endurance involved in athletic exercises and sports.

To see a swimmer go 100 yards under water or swim 30 miles in clothes in cold and rough water; to see a 15-year-old girl like Mary Ryan win the 440,880 and mile races in a single meet and set new American records in all three—is to see dynamic stamina at work.



Toughening the feet by walking barefoot

To see a 50-year-old man place well in a marathon run; to see men march 25 miles in eight hours carrying full army equipment or double time and march seven miles without a halt; or to see soldiers in battle go day after day with little food or sleep—is to see other types of endurance.

Many examples of endurance are claiming public attention in the present war. Not least as an example was Capt. Eddie Rickenbacker's 21 days of hunger, thirst and exposure in a small crowded four-man rubber raft in the South Pacific ocean.

A survey recently reported in the *Journal of the American Medical Association* called attention to the appalling unfitness of young men in endurance activities.¹ Several thousand young men entering the Uni-

versity of Illinois were found to be relatively more unfit in endurance than in other phases of motor fitness.

In 1941 some 620 out of 3099 boys could not chin over 4.5 times and most of these gave low Schneider Test scores. Among the lower third on the *Illinois Motor Fitness Test* 72.5 percent could not swim 440 yards, 67.8 percent could not chin or push-up on the parallel bars eight times, 46 percent could not run a mile in seven minutes, and 32.2 percent could not hold their breath 30 seconds after running in place for 60 seconds. Some 78.2 percent could not sit in the V-sit position with hands on the hips and feet off the floor for 60 seconds and 21.82 percent could not do 20 leg lifts and then 20 sit-ups in succession from a back lying position on the floor.

These boys are too soft of muscle and heart to compete in athletics or to fight. The lack of endurance indicated by such tests is an outstanding defect of our present era of soft living and cultivated habits of urban life. The physical training programs haven't been intensive enough for those who need conditioning the most. They haven't compensated for weak constitutions, lack of home labor, excessive indoor life, dependence upon trolley cars and automobiles, the movies, smoking and the radio habits.

Large numbers of young men and women are entering adult life unconditioned and unmotivated to maintain physical fitness. Unless this trend is corrected it is certain to harm their chances in war, will lower production in the hard labor jobs ahead and will contribute to the already appalling growth of chronic illness in middle age. About 80 percent of the youth graduating from high schools are far below what they should be in physical stamina, as may be proved by *all-out test exercises*. Girls are even more sedentary and have less than half the stamina in dynamic activities as the boys.

A strong constitutional type is a great asset. Tall and thin types with poor muscular development usually do not have endurance. Nor do those fat types carrying 30 to 40 pounds of excess weight for the skeletal and muscular build.

¹ T. K. Cureton, "The Unfitness of Young Men in Motor Fitness," *Journal of the American Medical Association*, 123: 69-74 (Sept. 11, 1943).

There are three physiological explanations of endurance: (1) Condition of the blood showing relatively small amounts of lactate after strenuous exercise. This involves complex phenomena connected principally to oxygen carrying and buffering capacity of the blood, secretions from the internal glands, and adequacy of respiration and circulation throughout the work; (2) Conditioning of the nerve endings (motor end plates) in the muscles to withstand fatigue and to coordinate by rotating the use of the muscle fibers available; (3) Training of the motor brain cells to generate great and continuous nerve energy currents according to the will-power exerted.

All of these are susceptible to training, so it is not surprising to find that relatively great improvements are made in endurance exer-



... and by walking on edges, with toes

cise tests for all types of people. The *endomorph*ic (fat-soft) and *ectomorph*ic (frail-thin) types improve a little less rapidly than normal or muscular types.

With athletically inclined young people there is no particular danger to strenuous endurance exercises as Dr. A. V. Hill² has said after a great deal of experimentation with the most completely exhausting (black-out types) of exertion:

"With young athletic people we may be sure they have gone *all-out*, we are moderately certain of not killing them, and practically certain that their stoppage (fatigue) is due to oxygen-want and to lactic acid in their muscles."

The great increase in endurance work is not harming the boys but is

² A. V. Hill, *Muscular Activity*, p. 110, Baltimore: The Williams and Wilkins Co., 1926.

the very thing they need. No permanent harm has resulted from the most strenuous exercises. The muscles, nerves, blood and senses reach their capacity and refuse to work long before permanent harm is done to the heart or any organ. In fact, it is the most recent scientific opinion that hard endurance exercise cannot hurt a normal heart.

Endurance in muscular exercises is limited by the amount of "crest load" the muscles, blood, or heart may take. Hard exercises involving a great overload may cause rather quick failure of the muscle fibers or the innervation at the muscle end-plates. If the muscles are not severely overloaded, the blood gradually accumulates more and more lactic acid with resulting respiratory distress. A "stitch" may develop in the side, a feeling of congestion may develop in the throat and chest, coordination gets poorer and poorer, finally nausea and headaches may develop. None of these symptoms is serious and with continued training are gradually overcome. Griffin³ states that such severe exercise causes new red blood corpuscles to appear in the blood for several days, supplied by the bone marrow in response to oxygen deprivation.

Strenuous exercise

In order to build endurance, exercises must be performed until considerable fatigue in the muscles and circulatory-respiratory systems develops. It works something like vaccination—we make the body temporarily sick and then it recuperates stronger and becomes more immune than ever. A person long out of training, soft or fat, will need a gradual program with progressively increased dosage, more and more as the work progresses. Under such conditions and being reasonably sure that there has been no recent illness or that no infection is present the endurance program will be safe. Great fatigue should be alternated with rest and a balanced diet.

In a single workout there are three important stages of progression:

1. *Warm-Up Stage.* In sedentary postures the five to six quarts of blood in the body may be deposited in considerable proportion in the splanchnic region capillaries (abdomen). After 15 to 30 minutes warm-up the blood volume passing through the heart in active circulation increases six to ten fold. Obviously more blood carries more

BREAST STROKE EXERCISE (CONTINUOUS)

oxygen to the muscles and more work can be done. The higher internal temperature reduces internal resistance.

The body is thus prepared for exertion in the warm-up stage and physical efficiency may greatly increase. Many exercises are only preliminary in nature and never get as far as the stamina building stage which follows the warm-up stage.

2. *All-Out Stage.* Endurance is developed by hard and continuous exercise which exceeds the "steady" physiological state and produces near exhaustion for the time being. Considerable respiratory and muscular distress should develop. If it doesn't, the exercise probably won't produce any improvement in endurance. Alternation of some hard exercise and some recuperation interspaced is a moderate way to develop the dosage to the straight "all-out" type.

The fatigue symptoms which develop in this type of exercising are chest or throat congestion, muscle ache, loss of control, "stitch" in the side, loss of strength and power, sweating, facial distortion, tremor, faintness, nausea, and even blackout of consciousness. Upset stomachs are fairly common in untrained types. These rather severe symptoms are associated with low sugar content of the blood and oxygen depletion and are not considered permanently injurious.

Jokl⁴ points out that long experience has shown that "athletic sickness" of this type isn't any more harmful than seasickness, auto sickness, mountain or air sickness. He maintains that the condition is harmless, leads to no serious involvements, and does not justify serious concern.

3. *Recuperation Stage.* This consists of walking, stretching, deep breathing, shaking and massaging tight muscles to induce good circulation and a gradual return to normal. Violent exercises should not be stopped suddenly. Steinhaus⁵ points out the physiological principle that only the contraction of muscles can drive the blood back to the heart.

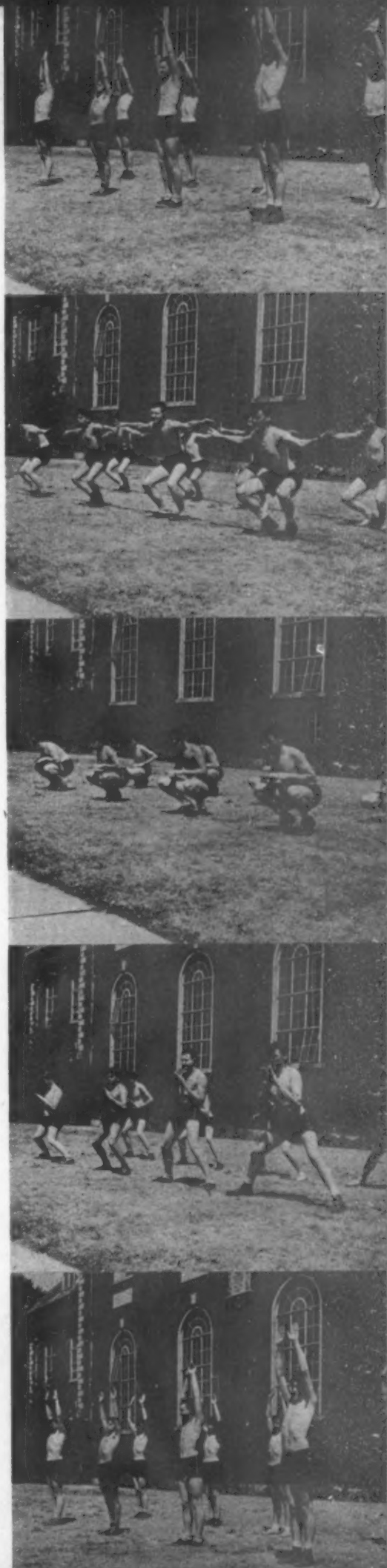
Hard endurance work requires at first much sleep for recuperation. Gradually this can be reduced. Tests may show a slightly rapid pulse and a lowered systolic blood pressure for several hours, even one or

(Concluded on page 28)

⁴E. Jokl, "On Indisposition After Running" (Athlete's Sickness and Vasomotor Collapse), *Research Quarterly*, 12: 3-11 (Mar., 1941).

⁵A. H. Steinhaus, "Stop Slower and Live Longer," *Coronet*, 14: 50-51 (August, 1943).

³F. W. Griffin, *The Scientific Basis of Physical Education*, p. 71, London: Oxford University Press, 1937.



WE'VE BEEN SHOOTING 26 YEARS

By Vosse R. Lewis

This is the third of a series of articles on riflery by Vosse R. Lewis, the man behind the championship Evanston, Ill., Township High School teams.

THE story of riflery at Evanston Township High School reads like a history of the sport as a high school activity. It was started in the fall of 1917, with Joseph H. Jones, a science teacher, and Frances W. Runge, a math teacher, as coaches.

The best guns available were purchased, and attempts were made to obtain the best ammunition, but this proved quite a problem since even the best brands were very irregular in those days. Each case had to be sampled in the various makes of rifles to determine which would be satisfactory for match competition.

The matches in those days differed greatly from those of today. The early matches were known as Bull's-Eye Long Run Matches. The object was to see how many consecutive bull's-eyes an individual could hit without missing, or the total number of consecutive bull's-eyes by each member of the team. These matches were fired on special targets. Prone matches were also very popular.

The Winchester Junior Rifle Club sponsored qualification shooting at this early date for junior organizations. In January, 1922, the Evanston Township High School Rifle Team joined the National Rifle Association, which took over the Winchester Junior Rifle Club. The cost of joining was \$17.

In the early stages of the N.R.A. only rifle matches were held; qualification shooting was started in about 1924, and Evanston rifle men were among the first competitors.

Evanston's first indoor range was built in 1917 by a group of interested boys under the direction of their coach, in an old condemned bakery. Several of the brick ovens were torn down and placed at one end for a backstop. Pieces of steel boiler plate of all sizes and descriptions completed the backstop.

Enough material was located to equip six firing points. On cold days one of the old bakery ovens in the immediate vicinity of the firing line kept the participants along the firing line semi-warm, but the temperature at the pit-end was about the same as out-of-doors. This range was used until 1922, when the police tore the building down.

The second range was located in the basement of a large store, the upstairs of which was used as an annex to the school. This range also had six firing-points and was equipped with target carriers on cables. It was very modern for the time and was used until 1925, when the new school building was occupied.

The first range in the new school was located in the attic, and due to inadequate space was very poor. It was used until 1929 when our present range was built, consisting of 22 points.

The new Evanston range has a double-deck gallery with eleven points on each landing, each of

which is equipped with a wooden table, 96 by 30 by 30 inches. On each table is a regulation shooting mat, a half inch thick. At the right of each table there is a target carrier, which runs on a thin cable. It is controlled by a wheel, turned by the firer with his right hand, so that it is not necessary for anyone to pass beyond the firing line at any time.

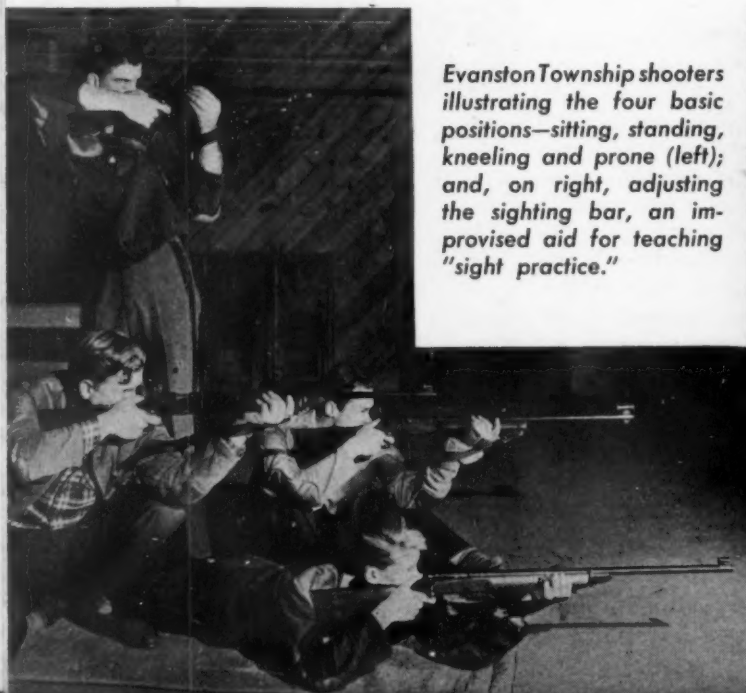
Our pits, upper and lower, are backed by an eight-inch brick wall, in front of which and immediately in back of each target position, is a piece of a quarter inch boiler plate, leaning at a 60-degree angle against a frame-work which acts as a support for the metal and hides the brick construction, except for a strip 36 inches high and 48 inches wide opposite each point. Here tar paper serves the same purpose. The tar paper is easily replaced, a necessary consideration, since this is the territory surrounding the target.

Each of the targets is perfectly lighted by two of the 44 lamps, whose reflectors are carefully focused upon it from three feet above and two and a half feet below. These lights and reflectors are also protected by a quarter-inch thickness of metal.

Our supply room is equipped with enclosed rifle racks in which 150 rifles may be stored. The school owns only 22 rifles, one for each point. The rest of the racks are assigned to individuals who own their rifles. One cabinet is used for storing new targets, while another is used for tools, parts and equipment

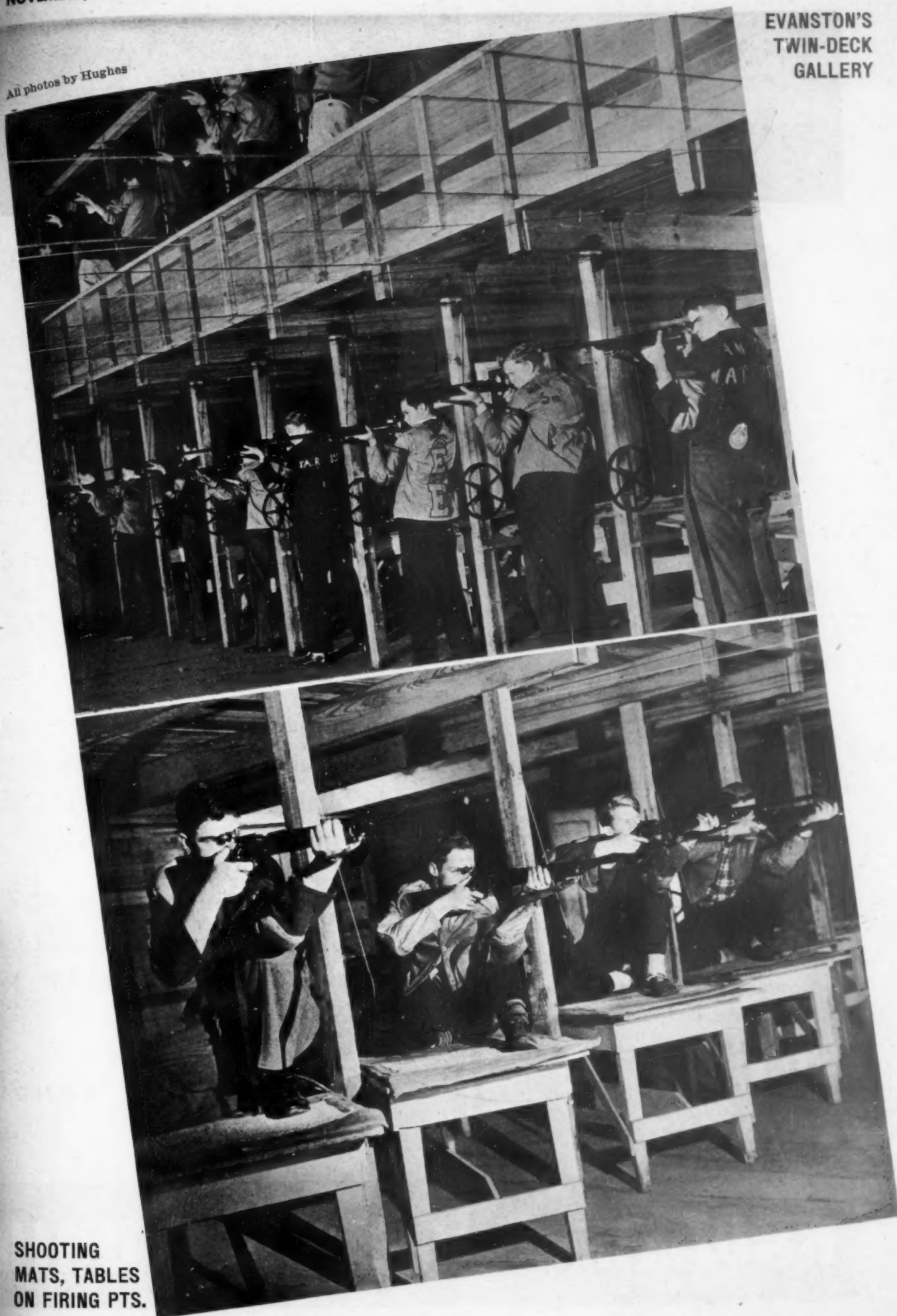
(Continued on page 32)

Evanston Township shooters illustrating the four basic positions—sitting, standing, kneeling and prone (left); and, on right, adjusting the sighting bar, an improvised aid for teaching "sight practice."

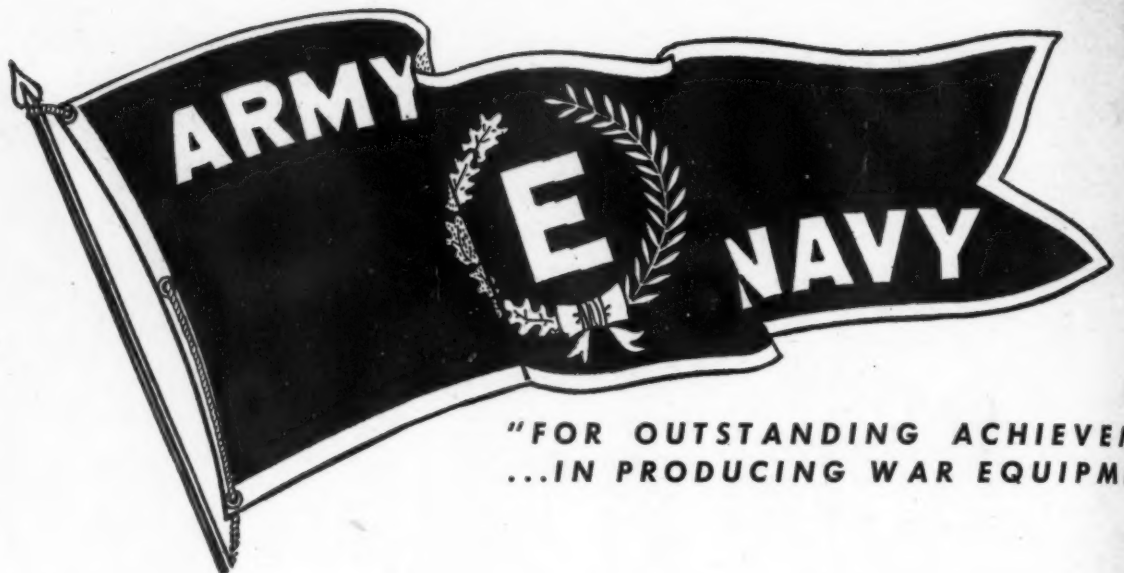


EVANSTON'S
TWIN-DECK
GALLERY

All photos by Hughes



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IT PAYS TO PLAY

PRACTICE MAKES PERFECT

by Hugh Forgie

Hugh Forgie is one of the four or five great badminton professionals in the world. With Ken Davidson, he has toured the United States and Europe with a badminton act that has been seen by millions. He has coached several national men and women champions; written a book, "You Can Play Badminton"; and appeared in moving pictures and television.

ALTHOUGH badminton happens to be my specialty, I have played most games and analyzed them with well-known players and coaches. From these discussions I have concluded that the bond that links most great athletes is a burning desire to play their particular sport.

Because of this desire, they are tireless in their efforts to practice and to keep themselves in good condition. Three national figures that immediately come to mind are Ted Williams, Bob Feller and Ben Hogan. If you are familiar with the careers of any of these athletes, you know of the hours and hours of practice, day in and day out, that has gone into their making. I'm speaking of *concentrated practice*.

The same principles apply to badminton. Concentrated practice of a few strokes every time you play will quickly improve your game.

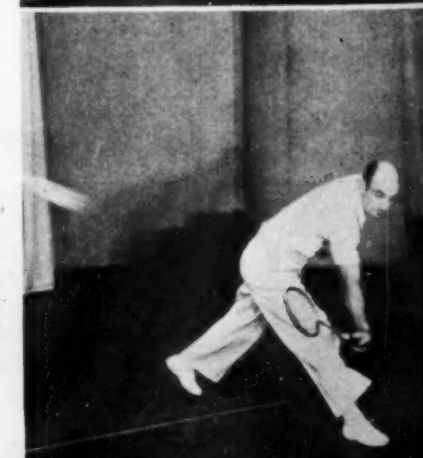
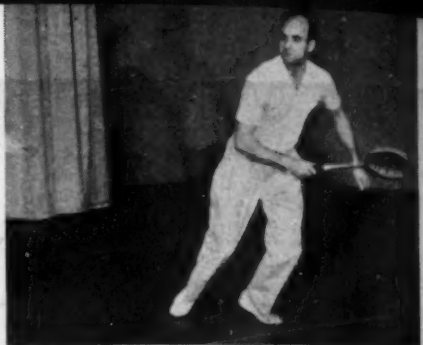
Personally, I do some of my practicing at home. I take my racket out of the press and swing it. I do not use a shuttlecock but, like a golfer, swing and swing in order to groove a free-moving throwing action.

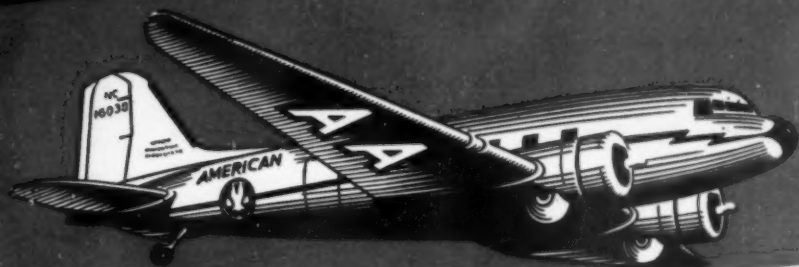
As I have indicated in previous articles*, I compare the forehand in

*Badminton Fundamentals, December 1941; Making the Badminton Strokes, February 1942; Outdoor Badminton, May 1942; Mixed Doubles, November 1942.

Hugh Forgie and Ken Davidson, famous pro badminton team, had the distinction of playing the first badminton match ever televised. Scholastic Coach's cameraman was on the spot and took these shots. On the left, Hugh Forgie is shown hitting an around-the-head smash. He plays the bird over his left shoulder, while shifting his weight from the right to the left foot. The actual hit is made off the left foot. The elbow travels backward during the shot and only comes forward on the follow through. The arm does not cross the line of vision during the preparation or execution.

On the right Ken Davidson is hitting a low backhand drive. Note how the racket is kept back and, at contact, how the arm and racket form a straight line. The bird is played off the right foot.





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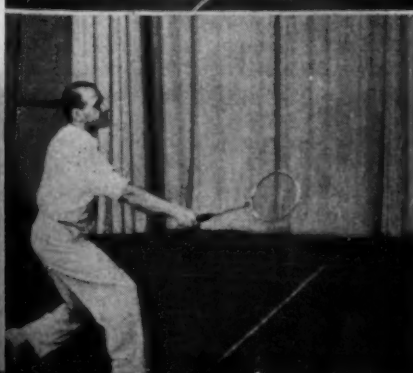
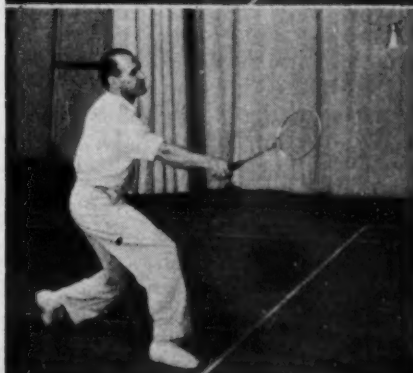
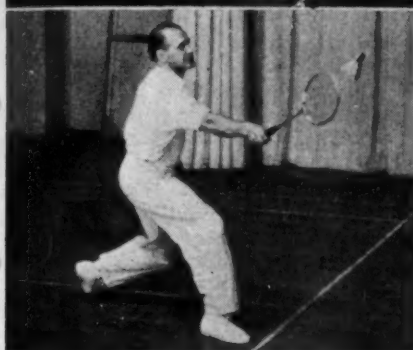
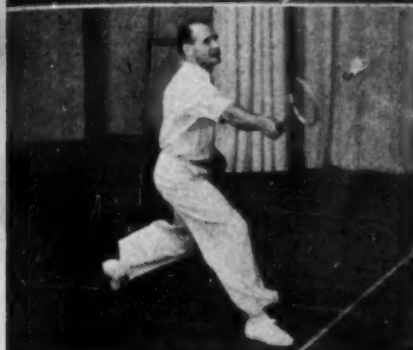
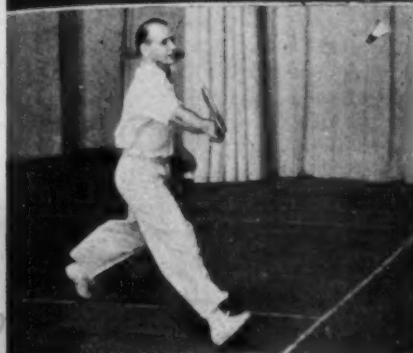
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badminton to the action of the baseball pitcher—whether he throws overhand, underhand or sidearm. The free-throwing action with the follow through of the body produces the good shots in badminton. A fast throw gives you the smash and a slow throw (same action) gives you the drop.

Beginners ought to spend a great deal of time clearing. Most players do not realize that it takes the finest coordination of the wrist, arm, body and legs to clear from base-line to base-line. You can't attain this coordination without faithful practice.

I would say that the service should be practiced as much as any stroke, for only when serving may you win a point. It is most important to practice a short serve which will just skim the tape and fall good within one foot of the front-service line. With the same preliminary action, you ought to be able to serve a high one that falls good within a foot of the back-line; naturally, the closer to the back-line the better.

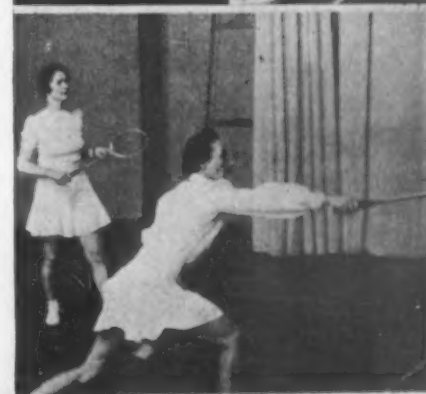
Delicacy is absolutely essential when playing net. You can get lots of fun and good practice out of playing a game of 15 points of net shots only. Use the front-service line as a back boundary and the outside lines as side boundaries. To eliminate the danger of being hit in the face, rule out all smashing.

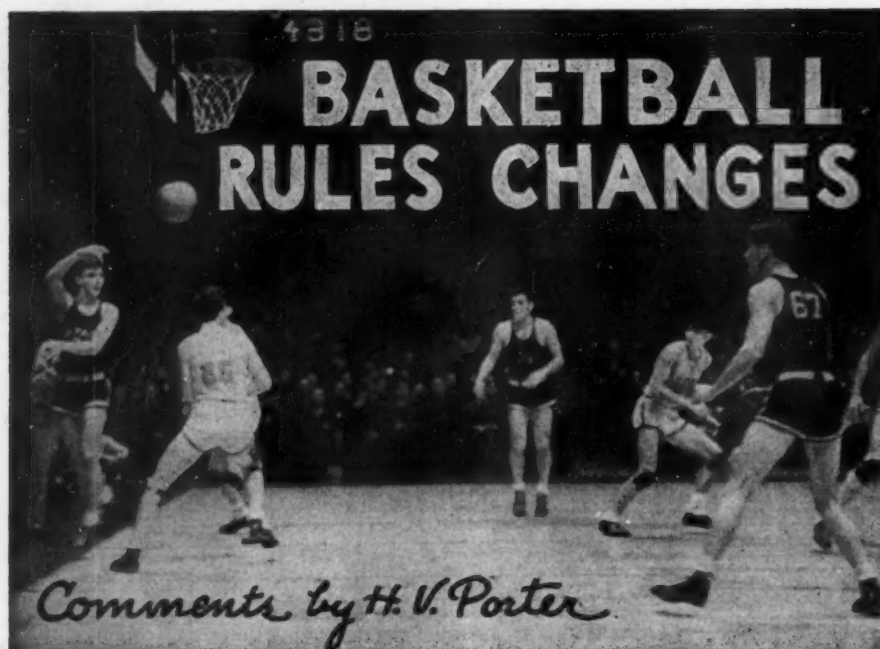
Another good practice stunt is hitting the shuttlecock against the wall. If you can keep up a volley against the wall with both forehand and backhand shots, you have made good strides as a badminton player.

Deception plays a great part in good badminton. Hence, whenever you practice, try to make all your shots with the same preliminary movements. All forehands have the same preparations and preliminary action, as have all backhands.

On the left Hugh Forgie is making a cross-court forehand placement. Although, as a rule, forehands are played off the left foot, it is often possible, as here, to make a placement with a short stroke off the right foot. Delaying the wrist action as long as possible adds greatly to deception.

The former American women's doubles champions are shown on the right. Wanda Bergman is watching Helen Gibson returning a service with a nice high backhand. Note the alertness of the receiver and the rapidity with which she moves into the front court. She keeps her wrist correctly back and follows through nicely. In both these strips, it is interesting to note that the players meet the bird as far out in front as possible.





THE changes in the basketball rules this season are confined to clarifications of certain inconsistencies, notably among the sections dealing with double fouls, multiple fouls and multiple throws.

Rule 4-7: Parts b and c have been reworded to make the statements about double and multiple fouls consistent and to settle arguments in connection with fouls which occur at approximately the same time. As far as "double foul" is concerned, there is no change from last year except in wording. The definition is now specific and it is made clear that a double foul occurs only when both are personal.

Last year there was some doubt as to the situation where one foul was personal and the other was technical and also the situation where two simultaneous technical fouls occurred. Last year's definition was not consistent with the fact that the double foul penalty was treated only under personal fouls while the definition itself implied that a double foul might involve one or two technical fouls.

Play: B1 pushes A1 and A1 is called for use of profanity. The pushing by B1 is deliberate or flagrant or while A1 is in the act of throwing for goal.

Ruling: If these were considered a double foul, only one free throw would be awarded for each foul, but this year's definition makes it clear that these do not constitute a double foul. Consequently, one free throw is awarded for the profanity and two free throws are awarded for the pushing.

The term "multiple foul" is now restricted to the situation where only one player of the offended team is involved. This can arise only when two or more teammates commit personal fouls against the same opponent. There were two possibilities in

fixing the limits on the multiple foul. In the past, there was no definition of the term and consequently there was a variation in the way these related situations were administered. The only coverage last year was in penalty c under 10-8 and this penalty clearly made it necessary to regard any two fouls by the same team which occurred at approximately the same time as a multiple foul. In such situations only one free throw was awarded for each foul. This affects situations such as the following:

Play: B1 pushes A1 and at approximately the same time B2 pushes A2. The act of B1 is deliberate or flagrant or while A1 is in the act of throwing.

Ruling: Under last year's Rule 10-8-Penalty c, only one free throw would have been awarded for each of the fouls. Such fouls were treated as a multiple foul, although no provision was made for the technical term and there was no definition of it. Under this year's rule, such fouls are not considered a multiple foul and each carries its own penalty.

A somewhat similar situation is the following:

Play: B1 and B2 push A1 and one or both of the acts are deliberate or flagrant or are while A1 is in the act of throwing for goal.

Ruling: Since both are personal fouls and are against the same opponent, they constitute a multiple foul and only one free throw is awarded for each of the acts, i.e., B1 is allowed two free throws (rather than three or four as would be the case if there were not a special multiple foul ruling).

Rule 10-8-Penalty C: The adoption of the technical term "multiple foul" has made it possible to cover all these cases in one simple statement so that the rulings for double foul and multiple foul are consistent.

Play: In a single double foul, what

is the maximum number of free throws that can be awarded each team? **Ruling:** One.

Play: For a single multiple foul, what is the maximum number of free throws which may be awarded a team? **Ruling:** Five.

Play: For several simultaneous double fouls, what is the maximum number of free throws which may be awarded to a team? **Ruling:** Five.

Play: For several simultaneous multiple fouls, what is the maximum number of free throws which may be awarded a team? **Ruling:** Five.

False Double Foul: Certain fouls resemble a double foul in two respects, they are followed by a jump ball at center and the free throw cannot be waived. Such a situation arises in cases where the first foul is followed by a foul by the other team. There is a definite time limit during which the second foul must occur in order to be classed as a "false double foul." That time limit is the time the watch is started after the penalty which follows the first foul. In the case of a false double foul, it is not necessary that both fouls be personal.

There are also certain fouls which resemble a multiple foul but which might be termed a "false multiple foul." The only special rule for these is the one which prescribes that the free throws must be thrown in the order in which the fouls are called. Here is an illustration:

Play: B1 pushes A1 and while the ball is being taken to the free-throw line, it is discovered that B2 has been playing without having reported to the official. In this case, there are two fouls by the same team but they are not both personal and they are not against the same opponent. Hence they do not constitute a multiple foul. The rules prescribe that the free throw for the failure to report must be thrown last, since it was the last to be called, even though the illegal act occurred before the personal foul.

Rule 1-7-Note: This note is designed to settle permanently the argument as to whether the large or small backboard will ultimately be considered the standard board.

The small board permits the attachment of the basket to the back of the board so that the entire front face is free and so that a standard attachment plate permits the fitting of any approved basket to any approved board.

Recent action of the war production board has given basketball goals a high priority rating. Hence, the new type basket is available to schools which may elect to change to the small type backboard by adding new boards to the main court or by trimming boards which are already on hand. For those schools desiring to use their old type goals on a smaller board (made in the manual training shop), working drawings may be found on page 39 of the rules book.

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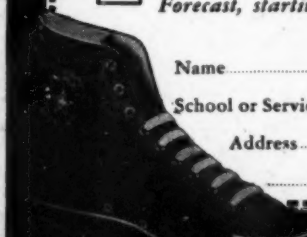
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Two seasons ago Southern Oregon College tried something new in the way of basketball officiating. They perched the officials in "crow's nests" above and back of the baskets, as shown. The arbiters called the fouls over the public address system. The actual administration of the game was left to four linesmen. Pretty good idea, eh?

Morris Kaufman directs the athletic program at the Mountaintop, N. Y., High School and serves on a sectional advisory committee of the New York State Public High School Athletic Association.

WHEN a basketball official accepts the responsibility of supervising 32 minutes of furious action, he takes upon himself a thankless chore. No matter how competently he handles the game, he can always expect some aggravation.

Referee-baiting is an old American custom. The wonder is, what with all the close decisions they must make, that the mortality rate among officials is so low. If an aspiring official has rabbit ears or a quick temper, he should never allow himself to be lured onto the court.

The mechanics of officiating may be found in any official handbook and in the various editions of the rules. Our purpose here is to pass along a number of suggestions that will help insure a well-managed game with respect to the official, coaches, and players.

As a start, digest the rules thoroughly so that you can refer to them unhesitatingly and unerringly. Basketball is greatly affected by the way the rules are administered and interpreted. Few sections interpret the rules in the same fashion, although they are getting closer to this desideratum every year.

WHISTLE BLOWING MADE EASY

By Morris Kaufman

The writer believes that the high school official should call 'em according to the letter of the rules—as they are written in the book, not as they are interpreted by other officials. Where the player finds the official calling 'em exactly as they are laid down in the rules book, he will adopt that interpretation as part of his playing philosophy.

Second, always try to be on top of the play. Players will argue more readily when they notice the official out of position—either too far away to see the play or on the opposite side of the play. To forestall the eternal query, "How could you see the play from where you were?", get on top of it.

Most offenses occur under the basket. If the referee takes his stand behind the basket, on the end line, he will have a good perspective of every play under the hoop. There, if errs on a play, the team erred against cannot put up too stiff an argument.

Third, follow the ball at all times, keeping the game at an interesting pace. While it is true that the rules committee would like to slow down the game, the official, other than calling time at the end of the four-minute mark in the first and third quarters, should let the players themselves do the decelerating.

How many times have you seen an official stay put no matter where the play is materializing? These arm-chair whistle blowers must change their mechanics. They are not being fair to the game, the players, the spectators, nor themselves.

Fourth, check on timers and scorers. Always make sure they know when to stop the game for substitutions. Many an argument can be averted if the officials, scorers, and timers will agree upon a set of signals beforehand.

Fifth, attend all conferences, meetings, and clinics. Nearly every section has conclaves in which the finer points of the rules are clarified.

Following are a number of inside suggestions which the official may use as guiding principles:

Make your decisions and walk (on fouls). Call the foul, give your reason, designate the offender, take possession of the ball, and move towards the foul line.

This involves two psychological points. First, it keeps you out of range of anything that may be said either vehemently or otherwise.

Second, it gives the penalized player time to cool off. If he has anything on his tongue, it will melt there by the time he reaches the moving official. Many verbal and fistic arguments have been averted by the distance between official and player.

Walking away from the play offers still another advantage. It lends to the impression that you are the boss and that you intend to run the game with a firm hand. The moment an official falters, the players will run him out of the game.

Don't argue with players. Just one word in defense of a decision is a confession of weakness. It encourages the players to argue on every play. After making a decision, don't allow any amount of persuasion to make you change it. If you pull a boner, don't try to even it up on the next decision. Two wrongs do not make a right. To err is human, but to try to even it up is simply unethical.

Blow your whistle and make your decision loud enough for everybody to hear. Unless you clearly designate the decision, there is bound to be confusion, especially on out-of-bounds balls.

An official of the writer's acquaintance designates possession by pointing to the receivers' basket. If none of that team is watching his hand, he awards the ball to the first man to touch it. As he puts it, he penalizes the team for not keeping awake. His failure to call his plays clearly has cost many a game.

Learn to anticipate the play. This helps you keep on top of the play. It's a good idea, if possible, to take in at least one of each team's practices (as many sportscasters do), or to spend some time with each coach, touching on the highlights of his system.

One fault of this anticipation is the fast whistle. There is only one occasion for a quick whistle. That is in anticipation of a fight or in the closing moments of a tight, closely guarded game. Even then the official's judgment must be keen. The tension at that time is magnetic. The official must never allow himself to be drawn into its heat. He must keep a cool head.

Keep in the best possible physical condition. Basketball is strenuous from beginning to end and demands all of a man's stamina. The official does as much or more running than any one of the players.



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NATIONAL FEDERATION NEWS

Edited by H. V. Porter

SCHOOLMEN who are sincerely trying to continue and expand their sports programs are running into stone walls in the form of travel limitations. A great deal of ingenuity is being exercised to overcome these obstacles. Distant trips have been eliminated, conferences have been reformed and contests between neighboring schools have been multiplied so that schools are competing against each other as many as three or four times a season. But, despite these readjustments, travel problems are still stumping the schools.

Efforts to secure relief from the federal OPA authorities have been made and are being continued. At the most recent conference between the high school and National Physical groups and the OPA panjandrum, an attempt was made to secure uniformity of administration in the gasoline rationing program. This was done in the hope of obtaining for all schools transportation privileges given by certain boards in sympathy with the schools' efforts to continue physical fitness and athletic work.

Assurance has been given that there will be continued attention to this matter, and rulings direct from the federal authorities are being placed in the hands of all state high school executive officers.

These rulings deal with the right of coaches, administrators, supervisors, and other school officials to an allotment of gasoline for occupational mileage in a car owned by the teacher, the school athletic department or the board of education, or which is rented or borrowed for the purpose of transporting one of these supervisors to a contest or demonstration at a nearby neighboring school.

It is hoped that these rulings will be liberal enough to allow—with the exercise of some ingenuity—each school to continue a reasonable athletic program. Complete details relative to these privileges may be secured from the state high school athletic office.

From the states

Florida: Secretary Golden reports that the prospects for a good sports season are better than they were last year. Many of the doubts which were prevalent at this time last year have disappeared and the schools are determined to go ahead with a full program of sports within the scope of present travel limitations and the shortage of manpower.

Colorado: Commissioner Truscott has sent printed folders of the comments on the 1943 football rules to all schools and officials. The logical way in which the football rules are

now grouped around the four time periods emphasizes the great progress made toward simplicity and equity by the high school football rules machinery.

New York: Secretary Archer declares in a recent issue of *Spot News*: "The New York Association is firmly resolved to maintain the vitality of interscholastic athletics in spite of difficulties. Recognition of the significant values of competitive sports in wartime is reflected in the determination of most member schools to keep going no matter what obstacles must be overcome. Contrary to the dolorous predictions of the pessimists, the hand-wringers and the faint-hearted, the well-known bag of wind is being agitated over hundreds of gridirons these days.

Minnesota: The State High School League is now at 312 Plymouth Bldg., Minneapolis. During the early part of the year it was at Albert Lea, the home of Secretary Peterson.

Eligibility rules

The war has raised a number of fine points in regard to interpretation of eligibility rules. Some states, for example, have ruled that a boy shall not be ineligible because of absence in the performance of military service. This raises the question of how many eligibility rules must be set aside in the administration of this rule. A summary of the various wartime eligibility problems follows:

1. Has any wartime change been made in the rule which requires coaches to hold a teacher's certificate, to be regularly employed on the teaching staff and to have his entire salary paid by the board of education?

Illinois, Indiana, Minnesota, Connecticut and Wisconsin have not found it necessary to modify their usual rule.

Alabama, Iowa, Kansas and Ohio have modified their rules to permit any holder of a teacher's certificate (even though he may not be employed as a teacher) to coach.

Kansas has modified its rule to make it legal during wartime for anyone to coach, provided he is approved by the board of control and is under supervision of the principal.

Michigan has a rule which approximates the Kansas modification but with liberalized provisions primarily for a few parochial schools

which have no one on the faculty who can coach.

2. If you have a rule which states that boys who are absent because of actual military duty shall not become ineligible because of such duty, what interpretation do you make on the following points?

- (a) Does such rule set aside the age requirements? None of the states sets aside its age requirements; if a boy returns from service after he has reached the age limit, he is ineligible.

- (b) If he leaves in the middle of a semester at a time when he is eligible in every respect and if he returns in some future semester while still able to meet the age requirements, is he charged with an entire semester's attendance for the semester during which he left, and is he considered ineligible until he has credit on the school records for the entire semester?

Illinois and Ohio have definite rules which make a returning boy immediately eligible. The other states do not have a specific rule relative to the matter.

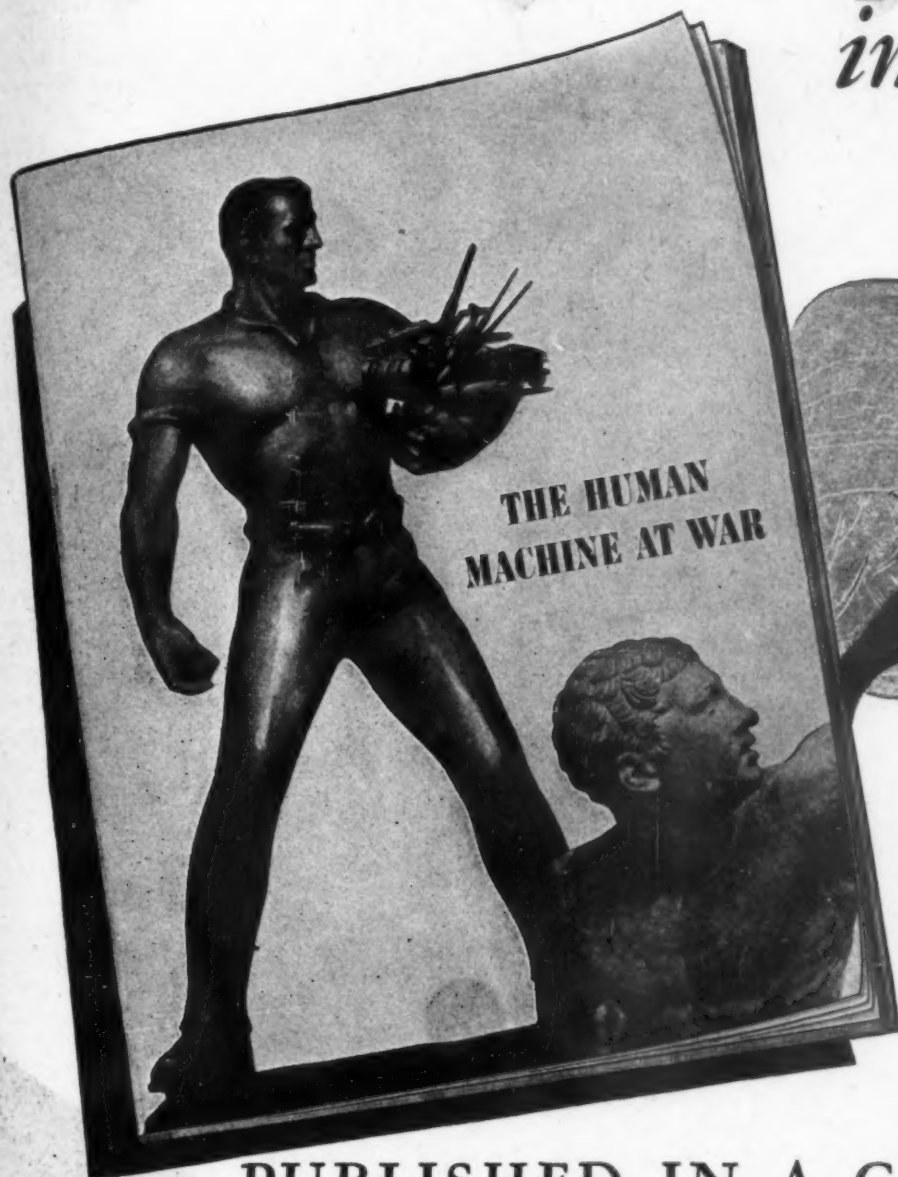
The Indiana board has some discretionary power in certain of these cases. Michigan, Kansas and Connecticut indicate that they will consider adoption of a rule similar to that in Ohio and Illinois at the fall Council meeting. Iowa, Minnesota and Wisconsin do not indicate that there is need for action.

3. What other modification in eligibility rules have you found it necessary to make because of war conditions?

Iowa is considering a modification to set aside the rule which requires attendance during the immediately preceding semester. Michigan has set aside the rule which prohibits a boy from participating in more than four quarters of a basketball game in a 24-hour period.

The Connecticut board has assumed authority to grant immediate eligibility to enlistees who have been absent several weeks and have then been rejected. Ohio has suspended its rule which states that boys whose parents move from the district will be ineligible for one full year after finishing the school year during which the move was made. This suspension is to apply for the duration.

For all believers in American Sports . . . in Wartime



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sports-trained America now and after the war. Many of the Nation's great leaders will receive this book which is limited in number in consideration of material shortages. If you care to write and it is possible to do so we will gladly send you a copy to be passed among as many believers in America's great sports as possible. Wilson Sporting Goods Co., 2037 N. Campbell Ave., Chicago, Ill. Offices in New York and other leading cities.

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WIS.

W. Harold O'Connor, baseball and track coach at Burrillville High School, Harrisville, R. I., is a steady and always welcome contributor to "Scholastic Coach."

Rationing and the Athlete's Diet

By W. Harold O'Connor

THERE was a time the coach could say to his squad, "For your pre-game dinner tomorrow, I'd like you to eat this and this and stay away from that."—and have some chance of getting the approval of the majority. Perhaps one or two of the boys might mildly object: "I don't like those things, coach." or "We don't have that at our house." But for the greater part of the squad, the suggestions would be accepted and followed.

Today the coach must listen to a new plea from not one but many of the boys in the group. "Gee, Coach, I'd like to eat that, but my mother hasn't enough red stamps to get it." Or possibly his top distance runner or star halfback may come up with "I can't get any of those things at my house, Coach. The store where we trade can't supply them."

Three considerations

To any coach who is careful about the food his boys eat before a game or a meet, rationing presents a crop of new problems. If he coaches in the East, he can suggest a small broiled steak or some nice roast beef and get a wide grin in response almost every time. Now I'm not going to suggest that the coach ask for a look at the family's ration books before he sets up a diet for his squad, even though it might help. I do suggest that he lay down no hard and fast rules for diet without careful consideration of three points:

1. What is good for the competitor?
2. What can the boys afford?
3. What can they get?

If the coach eats in restaurants, or boards out, or doesn't have to buy food with his own ration points, he might do well to take a good look at a point chart. Then, after he determines just what his suggested foods are going to cost in ration points, he ought to look around to see just how often the foods he wants are available in the markets, even if he has both points and money. Unless he wants to drive the boys into the black market, he will do well to consider the items in that order—points first, then money. He is much more likely to find a shortage of the former than a lack of the latter.

I don't think many track coaches will question the worth of such

foods as steak, roast beef, roast lamb, or chicken in an athlete's pre-game diet. The problem is where and how to get these foods. The answer here in the East isn't easy to give. The coach may have to forego that pet pre-meet meal he thinks is so fine. He may have to list a few substitutes. To be specific he had better list such things as chuck, lamb flank, calves' liver, and the like. They are much more probable items in the housewife's shopping lists today. He should not be too surprised to find that his athletes compete as well as ever on such meats.

Whether he likes it or not, the coach had better realize also that sausages are going to be popular items in the home meals of his athletes. I can appreciate the concern of the coach when he thinks of those nice, fat, greasy, pork specialties. No, they aren't just what the doctor would order for your cross-country star or best miler when he sits down for a meal before a race.

Some coaches may throw up their hands and say, "Let them eat; I'll pray." Others may try to solve the problem by ordering, "Don't eat any of that stuff before a race." But it may be wiser to suggest that the boy have his mother bake the sausage for the pre-race meal. That's far less liable to upset the runner than fried sausage would. Remember, in some homes such foods are commonly used, and boys seem to feel no ill effects in races. Many boys really need a little meat of some kind before they run.

The coach should remember that butter is often a mighty scarce food, with or without sufficient ration points. Honey is a fine substitute he can suggest. Boys usually like it, and it rates very high as an energy food.

In many communities milk deliveries are now made only every two days. The coach will do well to keep this in mind. Some of the athletes may find it difficult to get fresh milk at home. Lack of mechanical refrigerators and infrequent visits of the iceman add to the housewife's headaches. The coach may want to suggest that the boy get his fresh milk at the school cafeteria.

When the coach advises members of his squad to eat plenty of fresh

fruit, he should hasten to add that it should be ripe. A glance around the markets will suffice to show that many types of fruit are being rushed there before they are ready for eating. This is especially true of bananas and oranges. Under-ripe fruit frequently causes severe indigestion and diarrhea. Another thing he will learn as a surprise is that some markets are limiting the purchases of oranges.

More than ever the coach is going to have to steer his boys away from lunch-counter sandwiches. Hamburgers and hot dogs aren't getting better under rationing.

The diet list can be liberal with such things as cereals, fresh vegetables and fish. They can be obtained without straining the ration book. If he finds that eggs agree with members of the squad he can include them also. He is likely to find that many of his boys helped to harvest fine victory gardens this summer. They are going to have well stocked cellars as a result. Therefore the coach won't be far wrong if he lists several different types of vegetables in his pre-game diet.

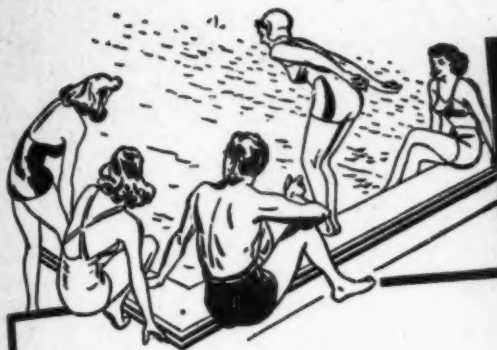
Spaghetti and macaroni are easily obtainable. You can safely recommend them if you can get your boys to keep away from the strongly spiced sauces that frequently go with these dishes. You will find that many of the boys and their parents, too, will approve of these foods.

Candy suggestions

Some coaches like to encourage the eating of chocolate candy and chewing gum before a game. They are going to find both of these hard to get at times. I have noticed that peppermint candy is quite easily obtainable under rationing restrictions. Many trainers consider this an aid in digestion after meals.

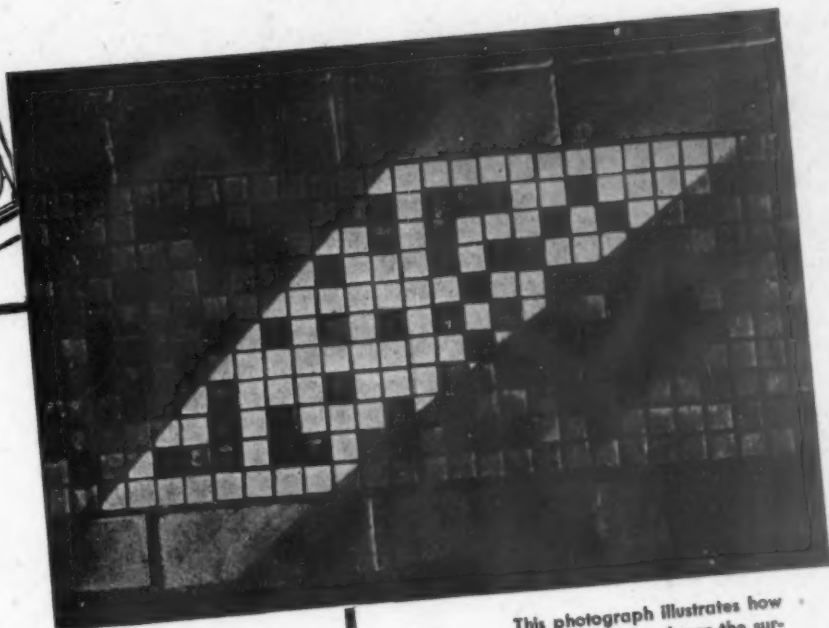
I have come to the conclusion that we should encourage the use of salt tablets by cross-country runners in the warm fall months. Ask any shipyard worker who has worked in the tanks with and without salt tablets what he thinks of their effectiveness in warding off heat exhaustion. Then remember how cross-country runners perspire as they go over the hills under a hot sun and you may come to the same conclusion that I have.

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Physiology

(Continued from page 11)

two days after exhaustive endurance work.⁶ There is no danger in these symptoms for a normal person but considerable rest is required to regain the normal state.

After sufficient training more and more work can be taken and the pulse will get slower and return to normal more quickly after severe exertion. In the trained state the blood pressure will remain more nearly normal after endurance work.

4. **Diet.** A training diet is important in the process of building endurance. A well-balanced and highly mineralized diet with restriction on animal fats, greases, pastries and heavy cream will help. Griffin (p. 66) summarizes that carbonic and lactic acids are formed in the muscles due to exertion, and muscular paralysis or death would ensue unless there were sufficient buffering substances in the blood obtained from vegetable food to neutralize their effect.

Foods containing the basic radicals of sodium, potassium, calcium and magnesium build the buffering content of the blood. Positively indicated are green, yellow and red vegetables, fruits, vitimized yeast, soy flour bread, and beans of the soy or lima type. Raw foods such as carrots, radishes, cabbage, celery, lettuce and tomatoes are important.

A review of balanced diet has recently been published by Gross in *Hygeia*.⁷

Kellogg⁸ has maintained that endurance is very much affected by diet, pointing out that no matter how strong the muscles may be or how well trained, the crucial determinant of endurance is ability to neutralize the lactic acid formed as a result of muscular action. This must be oxidized, re-converted into glycogen, or eliminated by the kidneys—all very largely a matter of blood conditions assisted by secretions from the adrenal glands under pressure.

⁶W. L. Savage, et al. "Physiological and Pathological Effects of Severe Exertion (The Marathon Race). *American Physical Education Review*, 15 and 16: (Dec., 1910) and (Jan., Feb., Mar., Apr., May, 1911).

⁷M. Z. Gross, "The Food We Eat," *Hygeia*, 21: 583-586 (Aug., 1943).

⁸J. H. Kellogg, "Why American Runners Lack Endurance," *Good Health*, 62: 15-16 (June, 1927).

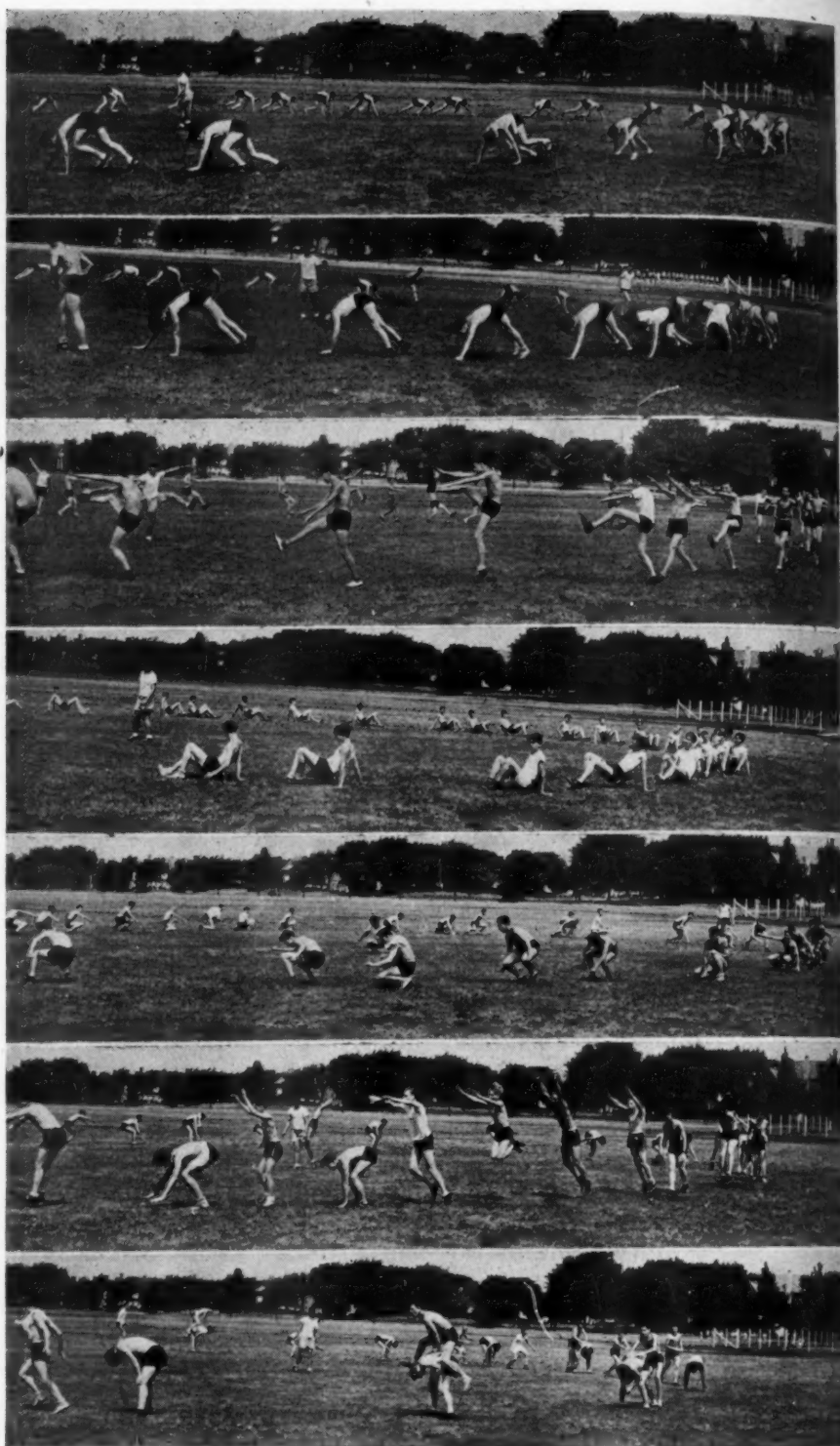
⁹F. A. Hellebrandt and P. V. Karpovich, "Fitness, Fatigue and Recuperation," *War Medicine* (Nov., 1941), pp. 745-768.

¹⁰P. V. Karpovich, "Ergogenic Aids in Work and Sports," *Research Quarterly Supplement*, 12: 432-450 (May, 1941).

¹¹E. C. Howe, "Diet and Endurance," *American Physical Education Review* (Nov., 1916), p. 490.

¹²M. W. Taylor and E. C. Howe, "Alkali Reserve and Physical Fitness," *American Physical Education Review* (Dec., 1929), p. 570.

¹³W. D. Sansum and Ruth Bowden, "Speed and Endurance Call for Low Fat and High Carbohydrate Content," Santa Barbara Cottage Hospital, Santa Barbara, Cal.



CIRCLE EXERCISES FOR WARMUP: From top to bottom, Crawling on All Fours, Straight Knee Walk on All Fours, Alternate High Kicking, Crab Walk, Duck Walk, Progressive Leaping, and Continuous Leap Frog. Done continuously, one leading into other, for 5-10 minutes.

A review of this has been published by Hellebrandt and Karpovich,⁹ and again by Karpovich.¹⁰ The basic principles have been summarized by Howe¹¹ and by Taylor and Howe.¹² One is always reminded of the experiments of Irving Fisher in 1907 at Yale University in which he showed the improvements to be greater among men who trained on the alkaline diet. Good

training diets have been published by Sansum and Bowden.¹³ In general it has been found that men become fatigued more quickly on fat than on protein and carbohydrate diets. Honey or potatoes would probably be more valuable just before a race than fat meat.

In next month's installment, Dr. Cureton will outline an actual exercise program for developing stamina.

MEMO

**TO: ALL COACHES AND
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FROM: CRAMER CHEMICAL CO.

AN ANNOUNCEMENT

It gives us a great deal of satisfaction to announce that Dr. Lloyd L. Boughton, Ph. D. is now with our firm.

Two years ago we retained Dr. Boughton as a consultant. At that time the "chemical world" was in chaos. Our sources of many basic crudes were lost. It was necessary that we go into the open market and bid for supplies. It was further necessary that these crudes be tested for purity and strength. For this job an expert was needed, and as Dr. Boughton had been "drug analyst" for the State of Kansas for the past 16 years, we felt that he had the highest of qualifications.

Now Dr. Boughton is with us in charge of research and promotion.

Born in South Dakota, in a dugout near Gettysburg, Dr. Boughton attended high school at Huron. He had two years at Huron College before World War I and completed his work at the University of Iowa after the war, attending the Iowa Coaching school under Howard Jones, Sam Barry and George Bresnahan in 1923. He came to Kansas in 1926 as a member of the School of Pharmacy faculty. Obtained his Master of Science degree in Biochemistry and



Dr. Lloyd L. Boughton, Ph. D.
*Our Director of Research
and Promotion*

Pharmacy, and his Doctor of Philosophy in Physiology and Pharmacology. He has been a member of the University of Kansas Medical School faculty for the last five years.

Dr. Boughton has carried on extensive research in Pharmacy and Pharmacology, and has published many scientific articles in journals associated with those fields.

He has always been interested in athletics, won letters in football and

track at Huron College. He served as first lieutenant, Infantry branch of the regular Army during World War I, played football with Ossie Solem, Fred Becker and other well-known football notables at Fort Snelling, under Dr. Williams. Dr. Boughton served overseas with the Advanced School Detachment of the 10th Division. He has been commander of two legion posts, at Platte, South Dakota, and at Lawrence, Kansas.

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The Cramer Chemical Company
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THREE-MAN HALF-COURT BASKETBALL

By Harold J. Weekley

Coach Harold J. Weekley has been getting good results in his intramural program at Washington Junior High School, Parkersburg, W. Va., with a three-man variation of basketball. This is not the impromptu game boys have been playing since basketball was invented, but a carefully organized game with several special rules.

WHEN a sport is originated it does not always meet the needs of the average school or community. As a rule the inventor is motivated by some local problem, and fashions his brain-child accordingly. The finished product, while perfection in his own locale, may not be quite so in other sections of the country. It is only after a few scientifically-minded rules mechanics do a remodeling job on the game that it starts serving a universal purpose.

Take basketball, for example. Originally nine men made up a team. But as the game increased in popularity and began spreading, it was gradually modified until the ideal number of players was hit upon.

Six-man football is another splendid example of how a national game was reshaped to meet the needs of the smaller schools. The six-man offspring was not designed with the idea of replacing the parent game, but to make it possible for many more boys to play the sport. Such is also the case with three-man basketball. It is not supposed to take the place of the five-man game but to supplement it.

The abbreviated game is very similar to the regulation game. A center, a forward and a guard constitute a team. Only one backboard is used and half the regular playing court. The following court dimensions are recommended: junior high school, 21 by 37 feet; senior high school, 25 by 42 feet; college, 25 by 45 feet.

Each team attempts to score at this backboard. If a player of Team A lays up a shot and misses, a teammate may follow up and tip in the rebound. If a Team B player recovers the rebound, he may try to score immediately or he may be required to pass off to a teammate. To place even more emphasis upon passing and teamwork, you may require Team B to move the ball out past the foul line before allowing them to attack the basket.

After a basket the team scored upon takes the ball out of bounds at the far end of the court.

The game begins with a jump at

center, with the centers facing the sidelines instead of the ends of the court. Rules of the regulation game apply except where otherwise specified.

When a player is fouled he puts the ball in play from the nearest out-of-bounds spot. He does not take a free throw. If the foul is flagrant, however, he is awarded two free tosses. The first team tallying 40 points wins.

The game is played in four quarters, the lines of demarcation depending upon the score rather than the time. The first quarter automatically ends the moment one of the teams scores 10 points; the half expires at the 20-point mark; and the third quarter at the 30-point mark.

For example: Suppose at the end

of the first quarter the score is 10-3 in favor of Team A. During the second quarter, Team B scores 17 points while Team A tallies 9. The half ends as Team B's 20th marker falls through the net, making the half-time score 20-19.

When the game is played in city leagues or the like, your official may call fouls just as in the regulation game.

Three-man basketball may be adopted by many physical education programs, used in rural communities where manpower is limited, organized into leagues on playgrounds, and be played in the gym as an introduction to the five-man game. Since basketball is primarily a passing and shooting game, the three-man adaptation is ideally suited to develop skill along these lines. With fewer men on the court the players may handle the ball and shoot more frequently, without sacrificing teamwork.

OPEN YOUR SEASON WITH A JAMBOREE

By Harold Shaw

OPEN your basketball season with a jamboree. It's the newest wrinkle in high school basketball and football circles and is catching on like wildfire in Washington and Oregon, where it was first introduced three years ago.

Everyone likes it. The fans turn out in droves, the coaches and boys get a peek at their future rivals and it's a money-maker for the league.

The idea is simple. Here's how it works in the Puget Sound Conference, an eight-team circuit in suburban Western Washington between Seattle and Tacoma.

Early in the year the Conference is divided into north and south divisions and a time and place set for the jamboree. In essence the jamboree is a championship game in which all eight teams participate. On the appointed day, which is always before the regular season gets underway, the teams gather at the predetermined site. In basketball each school is allowed ten players; in football twenty-two. The players appear on the floor or field fully dressed for play.

After the teams warm up for a few minutes, the master of ceremonies (usually a University of Washington coach) is introduced to the crowd. The m.c. calls the eight team captains to the center of the

floor or field and has them draw for opponents. Two hats are necessary for the drawing, each having four numbers in it. One is for the South captains, the other for the North.

The teams drawing No. 1 remain on the floor, the others retire to the sidelines.

Each pair of teams play a quarter. In basketball the length of this period is twelve minutes; in football, fifteen. The scores are cumulative so that it actually is a game between the North and the South.

At the start of the second and fourth quarters, the new teams take up at the point the two previous teams left off. A jump center or a kickoff opens the third quarter.

While the Puget Sound Conference uses the North vs. South motif in its jamborees, other leagues have different plans. Some four-team leagues play a round-robin, thus making the jamboree a six-period affair. Other four-team jamborees are operating on a semi-tournament basis with winners and losers of the first and second quarters meeting each other in the third and fourth quarters.

Several eight-team groups consider each quarter a contest by itself, but this idea does not work out well as a rule. Spectators who come to root for early competitors often leave after the first period.

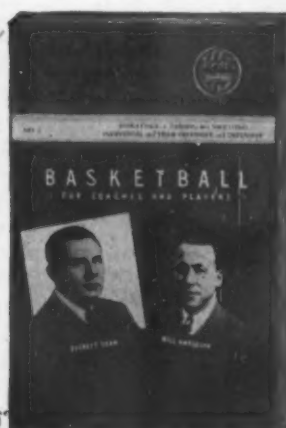
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Evanston's Shooting Program

(Continued from page 12)

with which to repair and clean rifles. Other cabinets contain bulbs, cables, supplies and official match targets that have been fired.

The school owns several shooting jackets of various sizes which are loaned to the members of the intramural groups. They are made of denim or khaki cloth, heavily padded at the elbows and plenty roomy. These are hung neatly with the privately owned jackets on the numerous false walls behind the upstairs firing points. The supply room has several windows from which equipment may be issued, or upon which valuable sighting scopes may be placed.

Beginners are taught, first of all, the nomenclature of the rifle and the proper and safe way of handling a gun. Too much emphasis cannot be placed on the latter. Explanations are made concerning the operation and proper care of the gun. After this, several periods are spent on sighting and aiming exercises. This is a very important step and is treated as such.

The sighting bar

A great aid in teaching proper "sight picture" is the sighting bar. This is a board about four feet long, on one end of which is a small piece of metal with a small hole to serve as the rear sight. About two-thirds of the distance down the board from the eye-piece, a piece of metal is inserted in a groove in the board. A hole is cut in the metal and it serves as the front sight. Near the far end, opposite the eye-piece, another groove is made in which a small piece of metal with a bull's-eye on it may slide.

The purpose of the exercise is to align the pieces so that the bull's-eye will appear in the exact center of the circle. Two students work together. The student coach moves the bull's-eye as directed by the beginner. After the beginner has a good knowledge as to how the sight picture should look, he is ready for aiming exercises. It is necessary for two students to work together on this exercise, also.

The beginner is equipped with a rifle and a solid box with two grooves in the sides, so that a rifle placed in the grooves will be held in the same position throughout the exercise. The student coach is equipped with a box, upon which a

piece of paper is tacked, a bull's-eye attached to the end of a stick, and a pencil. The bull's-eye has a hole in the center large enough to allow the point of a pencil to pass through.

The beginner assumes a prone position and sight upon the bull's-eye, which is held by the coach at a distance of 20 feet. The coach moves the bull's-eye as directed by the beginner. When the beginner has a perfect sight picture, he instructs the coach to mark. The coach places a mark on the paper through the hole in the center of the bull's-eye. He then removes the target, and the procedure is repeated.

After three markings, the dots are connected, forming a triangle. All parts of the triangle should be covered by a dime. When the beginner can do this nine times out of ten, the coach moves eight to ten feet farther away. This is continued at three or four positions until 50 feet has been reached. In each case, the beginner must be able to cover nine out of ten triangles with a dime before being permitted to increase his distance.

The next step is "dry-firing." The beginner is instructed in the prone position. He is now taught the value of using the sling and how to adjust it, and is instructed in control breathing. The breath must be held properly to insure a steady aim. The beginner is taught to inhale fully as he raises his rifle to his shoulder. While aligning his sights with the bull's-eye, he exhales slowly until his lungs are nearly empty. When his sights are aligned and his sight picture is clear, he again inhales slowly until his lungs are about half full. He holds his breath for a moment while applying the trigger squeeze, and resumes natural breathing immediately after the shot has been fired.

Trigger squeeze

Perhaps one of the greatest secrets of successful shooting is proper trigger squeeze. By trigger squeeze, we mean the ability to set off the rifle without disturbing the alignment by the pressure of the finger on the trigger. The tendency of the beginner is to align the sights and then give a quick jerk, hoping to get the shot off before the sights get out of alignment. This results in flinching and an unconscious contraction of the body muscles. The aim is deranged, and the shooter

never knows how his rifle was pointed at the instant of discharge.

The proper way is to take up the slack in the trigger. The shooter then begins the slow, easy movement of the trigger finger, which is commonly referred to as the "trigger squeeze." If his rifle or sights get out of alignment, he ceases to apply pressure; then, when proper alignment has been restored, he resumes the slow, steady trigger squeeze.

In this way, the rifle is discharged unbeknown to the rifleman; thus, he knows exactly where his rifle was aimed at the moment it discharged. Other factors have no opportunity to intrude, since the shooter himself does not know when the rifle will discharge. As a result, he is able to "call his shot," a practice followed by all good shooters. If the hit is not where he called it, he knows his sights were improperly aligned and can make the necessary adjustments intelligently.

Student assistants

Student coaches aid greatly in giving instructions. They check equipment, see that the shooting jacket is not too tight and that no other tight clothing is worn, aid the shooter in adjusting his sling, and check and improve the shooter's position if necessary. The coach should also see that the set screws which govern sight adjustment, are tight after they have been properly sighted in.

When the pupil is ready to commence firing, and the fire order has been given, the coach centers his attention upon the pupil and not the target. He watches the pupil's eyes for signs of flinching, the pupil's hands for proper trigger squeeze, the pupil's back for proper breathing. Immediately after the pupil has fired, he has him call his shot, to fix this habit.

The coach also firmly impresses upon his pupil the idea of "safety." He always insists upon the pupil keeping his bolt open when not in the act of firing; never permits the pupil to point his rifle in any direction other than the target; and never allows him to advance beyond the firing line nor walk behind the firing points with his rifle. He checks to see that the bolt is properly closed before the pupil attempts to fire, and never permits the student to use a clip (one shell only at a time, reloading after each shot). He sees that there is a minimum of talking and always strives to make the range a safe place and

(Concluded on page 34)

"Organized rifle shooting? I'm all for it!"

writes **FRANK S. O'BRIEN**

of the Springfield (Massachusetts) Trade School,
to Scholastic Coach

Springfield Trade School
1300 State Street
Springfield, Mass.
August 30, 1943

Scholastic Coach
220 East 42nd Street
New York 17, N. Y.

Gentlemen:

In answer to your letter of the 26th, I would state that the rifle program in our school has definitely been helpful.

For one thing, organized rifle shooting seems to help develop character and sportsmanship. Care of a rifle and care in using it develops a sense of responsibility, too. And rifle shooting helps develop coordination between young minds, nerves and muscles.

I know that our school rifle program has helped some of our boys who have entered the armed services, and I like to think that some day something I've taught those boys about shooting may save their lives. Entirely too many of the boys entering the armed services don't know the first rudiments of good shooting.

Another thing that our rifle program is doing is introducing the youngsters to a sport that they can enjoy all their lives. Long after people can't run around a tennis court or swing a golf club any more, they can still sight a target and squeeze a trigger, and have a lot of fun doing it.

There are many other advantages to a rifle program, too, and I am so much interested in shooting that I could go on indefinitely about it. But let me close with thanks to your fine organization for promoting organized rifle shooting. I'm all for it. If we can be of any help to you, let us know.

Yours very truly,

Frank S. O'Brien
Frank S. O'Brien
Adviser, Rifle Club



Remington will help you plan the organization of a rifle club and the building of a range. As a starter, we will be glad to send you, free, an interesting, fully illustrated booklet containing instructions on the operation of a rifle club—including information on equipment, marksmanship, target shooting, practical shooting and the construction of rifle ranges. Just fill in the coupon and mail it to Rifle Promotion Section, Remington Arms Company, Inc., Bridgeport, Conn.

Remington



S. C. 11-43

Rifle Promotion Section
Remington Arms Company, Inc.
Bridgeport, Conn.

Please send me, free, your booklet
on the operation of a rifle club.

Name _____

Address _____

School _____

City & State _____



Remington Model 513T bolt action target rifle
and Remington .22's with Kleanbore® priming.

*Reg. U. S. Pat. Off.

the rifle a safe piece to handle at all times.

Rifery has always been received with a great deal of enthusiasm at Evanston Township. We have a military training corps which serves as a stimulus for intramural competition. Each company of our unit, which is organized as a regiment, has its team and the combined staffs have their team, which gives us a fine league. Our varsity rifle members aid with the instruction in intramurals.

Rifery begins soon after school starts in the fall. Many of the boys have their own rifles. Those who do not are loaned a school rifle. The school rifles are the best that may be purchased and are equipped with the finest sights.

The varsity men take small groups each night and work on the scheduled assignments. By the middle of November, the new riflemen have received enough preparatory training to allow a reliable recommendation to be made to the cadet company commanders as to who may be expected to be their best intramural team bets. The cadet commanders may then form their teams.

We find our best varsity material through this source. When an individual becomes good enough, he may be elevated to the varsity. Then, if his work is of high enough caliber, he may win his major letter since riflery is considered a major sport.

Each intramural team has twelve members; ten men fire in each match, and the five highest scores are totaled to determine the team score. Five timed shots are fired in each of the four positions—prone, sitting, kneeling and standing. We permit N.R.A. positions but favor the use of the Army positions, as we use Army positions in all our varsity matches.

The school has been affiliated with the N.R.A. since 1922. Our club is known as the Frances W. Runge Rifle Club, in honor of its first coach. For years, this club has supported six to sixteen teams which have competed in many of the N.R.A. matches.

Throughout the year, a careful watch is kept for varsity material. These students may be brought up through intramural competition or through N.R.A. qualifications or both. There is ample opportunity for an individual to compete in intramurals and also fire for N.R.A. qualifications. A very popular way for a student to qualify is in the summer school course we offer every summer.

The varsity rifle team competes only in the late Fall and the winter months. Interest is so high that members are invited to report on the basis of previous varsity experience, intramural experience, or

PROCEDURE FOR PROCURING .22 AMMUNITION

With the issuance of War Production Board Limitation Order L-286, the ammunition requirements of N.R.A. affiliated clubs for pre-induction training can now be taken care of satisfactorily through established governmental procurement channels.

The N.R.A. feels, therefore, no useful purpose can be served by continuing the plan which enabled clubs to buy ammunition through the Association.

The Limitation Order restricts the sale of ammunition to groups specifically recognized by the W.P.B. and provides for distribution of the cartridges through normal jobber or retailer channels.

As in the past, rifle clubs are restricted to the purchase of .22 ammunition after W.P.B. approval in each instance. The procedure to be followed includes:

1. Make application on W.P.B. Form PD 860 (in triplicate), answering specifically the questions pertaining to clubs. Disregard Sections IV, V, VI and VII of the form which do not apply to rifle clubs.
2. Estimate how much ammunition the club will need for training purposes during a specific period (one month, two months, etc.) and order accordingly. Be sure your range and training facilities, as previously reported to the N.R.A., justify approval of your application.
3. Take or mail the completed form (three copies) to the firm you select to handle the order. Any ammunition jobber, retailer or distributing house is authorized to accept PD 860 applications from rifle clubs for the purchase of .22 ammunition. The seller you select must obtain W.P.B. approval before delivering the ammunition.
4. If your club has no jobber or dealer, you may send the purchase request forms to the N.R.A. for clearance through the W.P.B. After obtaining the required W.P.B. approval, the N.R.A. can, if requested to do so, also arrange for prompt shipment of your order by C.O.D. express through an authorized distributor.
5. There is no uniform price on .22 ammunition, but nationwide O.P.A. ceilings are in effect. So, regardless of who handles your order, the ammunition should cost no more than you have been paying—no more than was charged in March 1942 by the seller you select. The average distributors' price is about \$52 per case of 10,000 rounds, f.o.b. shipping point.
6. The required purchase request forms (PD-860) may be obtained from ammunition jobbers, dealers or distributors, or from the N.R.A. upon request.

on N.R.A. qualifications. In the latter case we require juniors and seniors to have at least their eighth bar, while freshmen and sophomores are required to have at least their fifth bar.

The first month is spent chiefly in conditioning. During the first two weeks, calisthenics, triangulation, and dry firing in all positions constitute the major portion of the practice period. The second two weeks are devoted to actual firing and checking positions. Even for the varsity, a portion of nearly every practice is spent on the student-and-coach method which was advised for beginners.

The arranging of a schedule is of great importance. It is very advantageous to schedule a good opponent that can be defeated, but not too easily, for the first match. If possible, the ideal set-up is to taper your schedule toward the season's tougher teams. No effort should be made to dodge tough teams. It is much better to be defeated in a close match by a superior team than to win easily from a poor opponent.

After the first match, practices are held only three times a week—Monday, Wednesday, and Thursday, with the match on Saturday afternoon. Practices are not drawn-out affairs; they consist chiefly of proper sighting-in and actual time firing.

From early season until mid-season, each member fires about 40 rounds in each practice session. Approximately four to eight rounds are fired in sighting-in, two to six are fired in the shooter's poorest position, five rounds are fired in the prone position, five to ten rounds sitting, five to ten rounds kneeling, and five to ten rounds standing.

After mid-season we fire the same number of sighting-in shots and poor position shots, ten rounds prone and sitting, and ten to fifteen rounds kneeling and standing. Throughout the year we fire "time" shots only, one shot per minute. Each member knows the pace and as a result does not feel strange under match rules.

On Thursday nights each week we have an intra-team match under match conditions, which may be compared with the Wednesday night intra-squad scrimmage in football or basketball. These intra-team matches have proven very beneficial, especially to the young or new members.

Records are kept throughout the season of the scores of each man in each position at every practice. Scores are also kept of individual performances in the matches.

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SCHOLASTIC

READY! AIM! FIRE! ENROLL TODAY

REGULATIONS

If your school has a rifle club, fill in the coupon below. The awards, drawchart and tournament instructions will be mailed to you before the date of your tournament.

If you wish to have a tournament but do not have a qualified instructor on your faculty, fill in the name of the man who would like to become qualified. He will receive the training course outline and study manual, and other necessary materials for becoming a certified instructor. If he has had any shooting experience, it would be well to include this in a letter.

There may be a qualified instructor in your community who is not a member of your school faculty. If you would be interested in having such a person supervise your tournament, indicate this in the coupon and the National Rifle Association will check to see if one is available in your community.

The awards, tournament drawcharts, and other materials will be sent to your school as soon as we are notified that a qualified instructor is available to supervise your students' rifle instruction and tournament.

If the number of students qualifying for your tournament is so large that you wish to run your tournament in sections, indicate this in the coupon and we will send awards for the winner of each section.

This is the award for boy and girl winners of your tournaments. It is a brassard 3 1/2 inches in diameter whose design and lettering are embroidered in silk on a heavy felt base. The colors are red, gold, and dark blue.



NATIONAL SCHOLASTIC INTRAMURAL FALL AND WINTER RIFLE TOURNAMENTS

● **BULL'S-EYE!** Here is a dead-center hit for your rifle program—an intramural tournament run by you wholly within your school. It's fun; it's exciting; and it's educational. A wholesome means of promoting the art of shooting, so essential in these times. There is no obligation, no red tape. All you do is fill out the coupon. We send the awards, drawcharts and other helpful materials. So important is this shooting-training considered that a limited supply of .22-calibre rifles and ammunition has been made available for organizations conducting accredited, supervised programs. Read the regulations and mail the coupon today.

APPROVED BY THE NATIONAL RIFLE ASSN.



SCHOLASTIC INTRAMURAL RIFLE TOURNAMENTS 220 E. 42 St., New York, N. Y.

Please enroll my school and send the awards, drawchart and tournament instructions. We will have a boys' tournament _____; girls' tournament _____ starting date _____

My name _____ Faculty position _____ I am a qualified N.R.A. instructor _____ (check). I wish to become a qualified instructor. Please send me the training course outline and study manual _____ (check). I would appreciate help from the National Rifle Association in finding a properly qualified instructor in my community _____ (check).

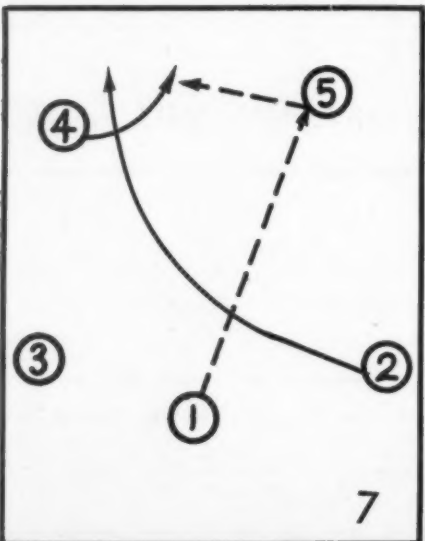
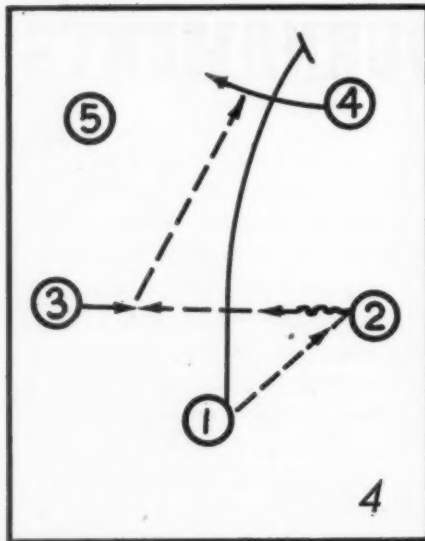
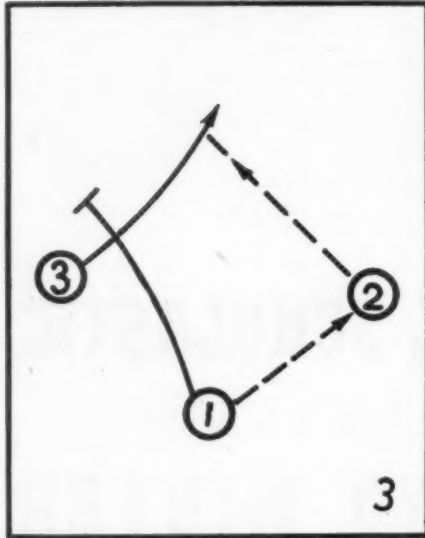
Send information on how rifles may be obtained _____

Name of School _____ City _____ State _____

Enrollment of School: Boys _____ Girls _____

deep just as 1 did; thus 5 and 4 will be screened nearly simultaneously for the pass from 3. If the pass goes to 5, he may relay it to 4, or vice versa, or he may try for the goal.

Diag. 6 illustrates Shelton's "Circle on the Front Line," with 2 screening for a front line man, 3, after passing to 1. No. 1 passes in



Wyoming Offense

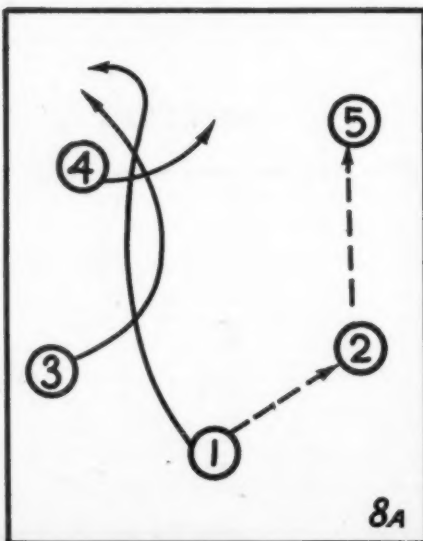
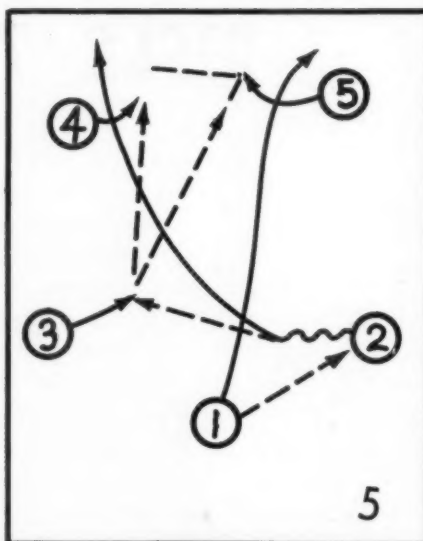
(Continued from page 7)

to 5 who relays the ball to 3 cutting in.

In **Diag. 7**, the screen is on the back line, 2 passing to 1, then swinging in to screen for 4. The passing sequence is 1 to 5 to 4. No. 2 may also swing wider to free 3, and then continue to the 4 position for a two-fold possibility, so that 5 will look first for 3, then for 4—a combination front line and back line circle.

The "Double Circle" (**Diag. 8a**) is a bit more complicated but extremely effective. After a series of preliminary passes, 1 snaps to 2 and cuts toward 3 and thence to 4. No. 5 looks for 3 and also for 1, but knows that if neither is freed, 4 will certainly be opened by this double circle.

If all these possibilities fail, 1 has time to swing back up the sideline and in toward the foul line again for a set shot, receiving the



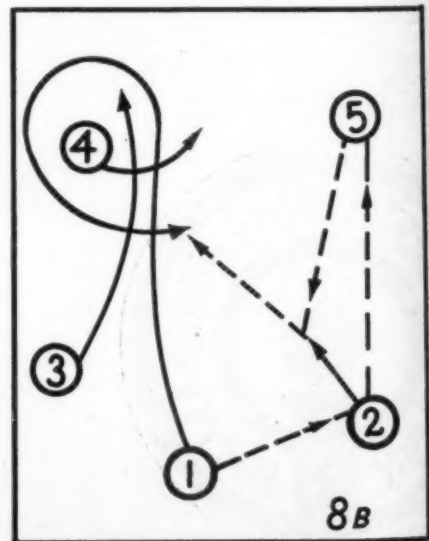
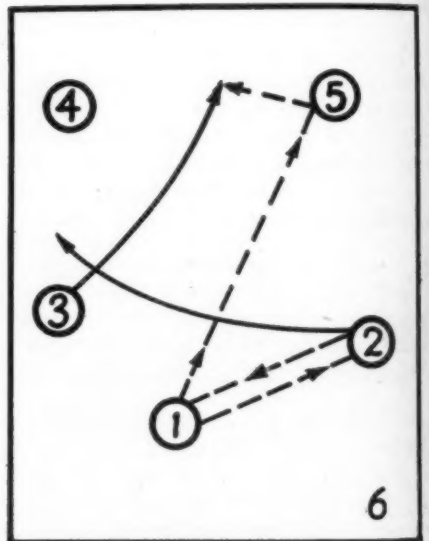
pass from 5, as shown, or from 2, as outlined in **Diag. 8b**.

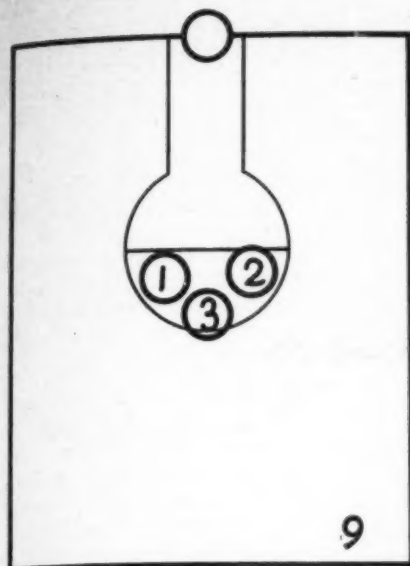
The Wyoming out-of-bounds plays are delineated in the next three diagrams. In every out-of-bounds situation, the outside man holds the ball in two hands above his head.

In **Diag. 9**, two men face the basket with a third behind them, also facing the hoop. The best bet is a high arch pass, with 3 stepping back and taking a set. No. 3 may also drive right or left. If X1 or X2 switch to him, 1 or 2 may drive down the center for a pass.

Diag. 10 is a typical Cowboy double screen, with 1 and 2 screening for 4 and 3, who drive in for shots. If the defense switches, a high lob pass to 4 or 3 right where they are, will also provide good set shots. No. 4 or 3 may also cross after they have been freed.

Diag. 11 outlines a three-man tandem on the foul line, with the men facing the basket and breaking either right or left to throw off the guards.





Particularly outstanding nuggets from Shelton's lectures follow:

1. Boys must be made to compare themselves with themselves, and not with others. Are they doing their very best? that is the question.

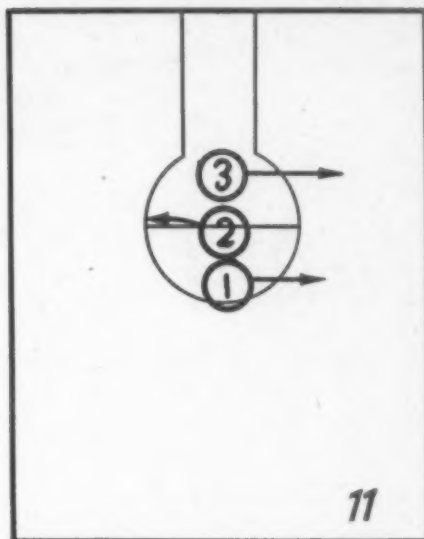
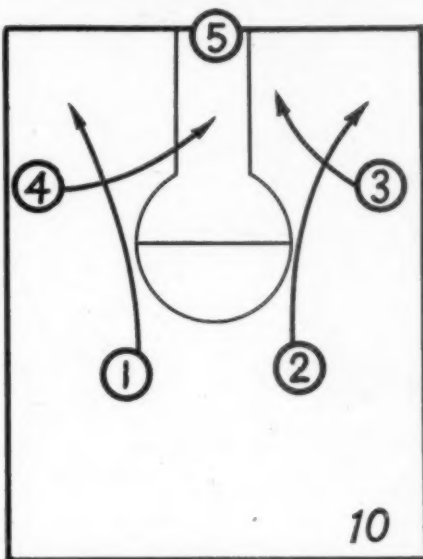
2. Your numbers 7, 8, 9, and 10 men must know why they are on your squad. Usually they are specialists, defensively or offensively,

and must know that there are only certain times in a game you can use them.

3. We don't shoot unless the chest faces the basket.

4. Too many coaches make the mistake of playing the post player bent over—we play him upright.

5. Basketball players and basketball teams are built through confidence—confidence in themselves and confidence in their coach.



6. Our lives are not our own in this athletic world (Shelton followed this up with an inspirational talk on leading a life, either as an athlete or as a coach, which will be an example for the youngsters who idolize athletes and coaches.)

7. We can't make a defensive player do anything, but we can sure make him wish he had.

8. Wyoming doesn't hesitate on offense; we drive; then when we're right we're really right.



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Bumps, bruises, wrenched muscles, sprained ankles—every trainer ought to be twins these days. Compulsory athletics for every boy in school has increased minor injuries to an all-time high.

But the trainer has at least one good assistant in Antiphlogistine. This ready-to-use medicated poultice helps out in countless cases of minor muscle or skeletal injuries. It's standard equipment in schools, colleges, pre-flight and pre-naval training centers from coast to coast.

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Coaches' Corner

Add War-Is-Hell Dept.: We always knew, what with the acute manpower shortage, that Bertha the sewing machine girl and Mabel the manicurist were having a tough time of it socially. But we never dreamed that the horsy set was also having its troubles. Imagine a beautiful tennis champion—literary, no less, and who can play the piano—*advertising* for social companionship! We couldn't believe our eyes when we ran across this ad in the *Saturday Review of Literature*:

YOUNG WOMAN, extremely attractive, unusual personality, literary and aesthetic, prominent tennis champion, talented pianist, British-born, desires correspondence with cultured, professional gentleman of similar interests and characteristics. Box 220-H.

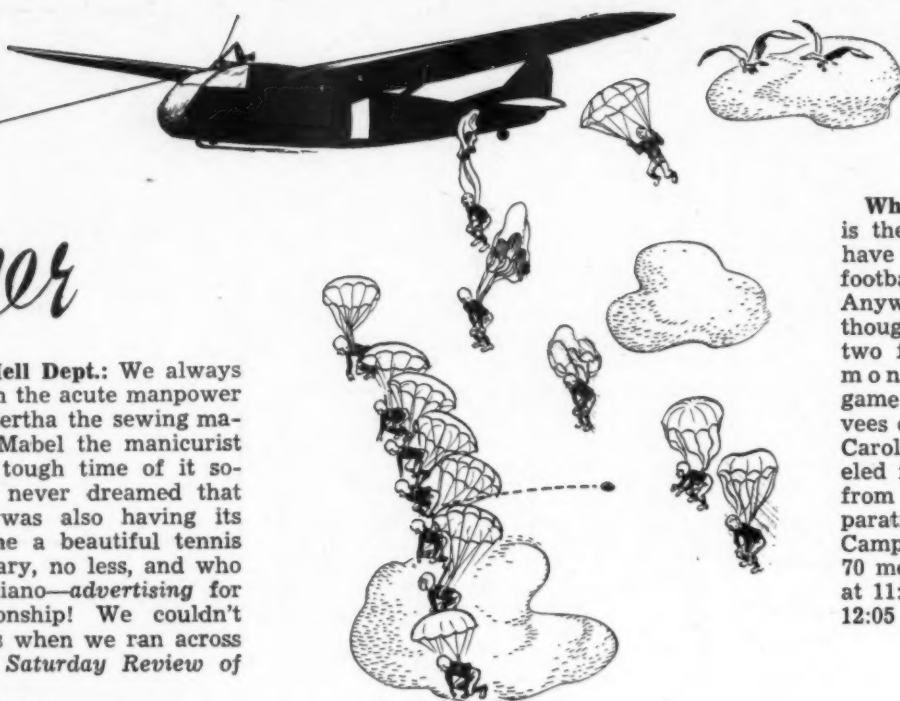
We'd answer the ad ourself if we were cultured, aesthetic, literary, professional, and British born.

Pennsylvania produced a lady football coach, Indiana came through with a girl place kicker, and Philadelphia, last month, cropped up with two "linesladies." Doty Cole, 20, and Agnes Jones, 23, made their officiating debuts in a Pop Warner Conference game, wearing uniforms of black slacks, white blouses and bow ties. Remember those wonderful days when a woman's place was over a welding machine?

The "E" for diplomacy this month goes to Jack Glascott, one of the officials in the Yale-Columbia game. With a few minutes to go, he caught Lou Little waving his program at his Columbia players. The Columbia backs moved closer to the line and shortly afterward Tom Rock got away for a touchdown.

After the game Glascott told Little. "You know, Lou, I didn't call any penalty against you for coaching from the sidelines. I knew you wouldn't think of doing such a thing. When you waved that program, I knew you were simply signaling the spectators to go back into the stands—that the game wasn't over."

Perhaps the biggest single wager ever dumped into the mutual machines was a \$66,000 bet on Count Fleet in the Belmont this year. A round little man, dressed somewhat untidily, came up to the \$100 window



Drawn by Kate Tracy

Whacky? Not at all. This is the way *your* boys may have to warm up in the football world of tomorrow. Anyway that was our first thought when we read that two football teams last month traveled to their game in *gliders*. The jayvees of Duke and the North Carolina pre-flighters traveled in Army troop gliders from Chapel Hill to the paratrooper training base at Camp Mackall. Laden with 70 men, the gliders took off at 11:20 A.M. and landed at 12:05 P.M.

and laid down 66 one-thousand dollar bills. It took 14 minutes to punch out the 660 tickets. The fellow stuffed them in all pockets and still had a bale of them to put away. So he opened his shirt and piled 'em in there.

About five minutes later, he came back, disgorged the tickets from their hiding places and was given his 66 one-thousand dollar bills along with a neat profit.

Which is nice work, if you can get it. And ruins that nice gag we had ready about the definition of horse sense, to wit: horse sense is that instinct a horse has which keeps him from betting on people.

The "skull" of the world series was not pulled by Billy Southworth or Walker Cooper. That honor went to the announcer at Sportsman's Park. When the Cards tied the score in the seventh inning of the fourth game, some of the bleacher fans were so jubilant they threw empty beer bottles and other missiles onto the field.

The sterling humanitarian at the mike came to life immediately: "Ladies and gentlemen, please do not throw bottles," he exhorted. "Let's be sportsmen. You may cause serious injury to some of OUR players."

If you can believe what you read in the papers, Big Bill Tilden is now giving private lessons in Hollywood and uses a new method. He insists that the California youngsters never learned how to walk properly because they always used cars. Bill therefore starts his instructions with lessons on how to walk properly.

We don't get it. What has walking to do with tennis? Look at the record: Californians have been dominating the tennis world since the

year 1. What Bill ought to do, it seems, is come East and teach the youngsters how to walk improperly.

Hay foot, straw foot. Clint Wager, 6-6 Chicago Cardinal end, is the first football player in history to knock himself out. In a pre-game practice, he drew back his leg for what he hoped would be a long, booming punt. Alas, he missed the ball and struck his head with his knee—suffering a minor concussion.

That last Dodger-Cincinnati baseball game must have been a lulu—a page out of Ring Lardner. It seems the Reds went into the game needing four double plays to break the National League record. They made two in the first four innings, then things started poppin'. Durocher, who is no Cincinnati lover, set out to foil them. Everytime a Dodger reached first, Durocher sent him down on a steal—breaking up the twin-kill set-up. As the innings slipped by, the Reds became frantic. So Pitcher Vander Meer started walking men to put them on base. But everytime the batter reached first, Durocher would send him down. A hilarious time was had by all but the Reds.

What is a sports roundup without a tale about Dizzy Dean? Credit for the latest goes to Frankie Frisch, who managed Dizzy in those turbulent Cardinal days. Before that famous world series with the Detroit Tigers, Dizzy came to Frisch and said he wanted to pitch every game. "You can't do that, Diz," Frankie said. "This is the world series. You can't win four games from the Tigers."

Diz thought about this for a while and nodded seriously. "I know," he said. "But I can win four out of five from them."

One of the most monumental boners in football history was averted by an eye-lash—all right, two yards—in the Great Lakes-Fort Riley game early this season. Fifteen seconds left to the game. Great Lakes ahead, 20-19, ball on their 33, third down.

Steve Juzwik, ex-Notre Dame, took the ball from center, glanced at the circling clock hand, and instead of hitting the line, floated back toward the goal line. When he was at the 20 the final gun sounded. Did Stevie ground the ball and end the play? No.

Instead he went on, gliding backward, with the Fort Riley forwards making grabs for the ball, but avoiding tackling Juzwik. Steve kept pointing excitedly toward the clock as though to say, "Game's over—go away." By now he was on the two-yard line. Two more yards back, a tackle in the end zone, and Riley would have a safety and a 21-20 victory.

But at last Steve saw the light. He put the ball down. And only then did the game officially end. These long autumn nights, Steve sleeps with a rules book under his pillow.

Out Turner, Kan., way, reports Coach Merten Pettey, the football squad elects a game captain and the school chooses a queen for the annual homecoming game. This year a brother-sister team walked off with the honors. Gerald Lillich was elected captain and his twin sister, Geraldine, homecoming queen. The combination clicked—Turner won 13-0, with Gerald scoring the first touchdown.

One of the nicest compliments paid to the sporting goods industry thus far in the war was the awarding of the Army-Navy "E" to the Rawlings Mfg. Co. for outstanding achievement in producing war equipment. Rawlings thus becomes the first athletic goods manufacturers to receive the coveted honor. More significant, however, is that it marks the first official recognition of the fact that athletic goods for the Armed Forces are an important factor in the promotion of the war effort.

We don't believe in printing unsigned letters but we're making an exception this month. A Mrs. X sends us a slip to the effect that Spencer M. "Pop" Bennet, the beloved father of physical education in the Atlantic City public schools has retired after 33 years of inspirational leadership. Mrs. X describes herself as the "mother of a boy who was put on the right track" by Mr. Bennet, and writes that the retired school man is interested in hearing from his friends and associates. He can be reached at Providence Court, Chelsea Village, Atlantic City, N. J.

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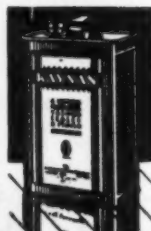
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CENTER PLAY FROM THE FLOOR UP

(Continued from page 9)

at the same time shutting off his opponent from a direct approach to the basket.

The defensive center is in the best position to capture these rebounds. Unless he is playing zone, the center is practically always between his man and the basket, and a step or two closer to the basket. By "boxing out" the attacker, the center should be able to seize most of the rebounds.

As he moves in, he should attempt to judge the probable nature of the rebound. As a rule, the longer the shot the farther will be the rebound. The center should never go in too fast or too far, or the ball may rebound over his head. The choice spot from which to effect the recovery is eight or nine feet from the basket. He should hold his ground until the ball strikes and then move quickly to recover it.

Prior to the actual jump, the player's knees should be bent and his legs far apart. This permits him to get up high or to dart quickly in any direction for the ball. He must watch the ball intently and hold his position until he is certain of the ball's direction.

After judging the height, direction and velocity of the rebound, the player is ready to go up after it. He leaps high into the air, extending his hands and arms fully and reaching for the ball. The complete extension of the arms is very important. Many centers execute a fine jump and then nullify it by catching the ball about chest-high with arms bent. Against worthy opponents, the extra inch or two in height may spell the difference between success or failure.

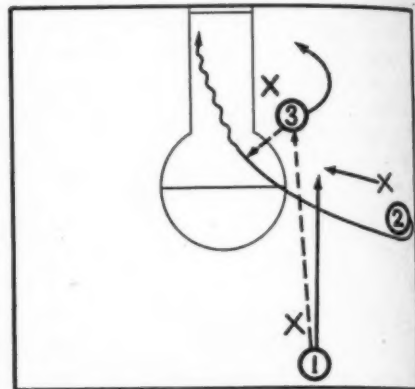
Protection of ball

On the way up, if the center is crowded by an opponent, he may swing his body between the opponent and the ball. However, he should be careful not to foul by throwing his hip into the man.

Having secured possession, the player alights. He lands with feet well spread, knees, bent and his body between the opponent and the ball. By keeping his feet apart and hips low, he is ready for any accidental body contact. The ball is held close to the body with the elbows extended to the sides, discouraging any opponent from attempting to steal it.

Under the offensive basket, tipping in is a valuable adjunct of

the rebound. The rebound basket is the easiest goal in basketball. In this respect, it is important to warn the center against being a "one-jump-John." Teach him to go up, come down in a crouch and go back up again. As a warmup drill on this, you may toss the ball against one side of the backboard and have the boys bounce it off the board three, four or five times before tapping it in.



Diag. 3

I teach my centers to rebound with the tips of their fingers, using the wrist to flick or top the ball into the basket. I've found this is much more accurate and provides a greater height advantage than slapping the ball with the palms. When the ball shoots off to one side or one arm is "inadvertently" held or jammed to his body by an opponent, the center should rebound with one hand. He should keep the ball high, never bringing it down.

In leaping, the jumper should get his drive from his feet, legs and the upward pull of the arms as they are thrust toward the ball. He should try to contact the ball at the top of his leap. For, at that moment, he is temporarily stationary and can more accurately flip the ball.

Ball-handling is of prime importance not only in the pivot but also on rebounds. A center who recovers the defensive rebound and then can't accurately pass it off is of little value.

In the pivot, the ball-handler must be a real artist. He must know when to fake the ball, when to give it, when to shoot, and when to return it to the back court.

We teach our center to take a step to meet the ball and to play in a crouch to take advantage of his body reach. To block the pass in, the guard must play him to one side. Thus, he leaves the other

side open for a quick pivot and dribble or shot.

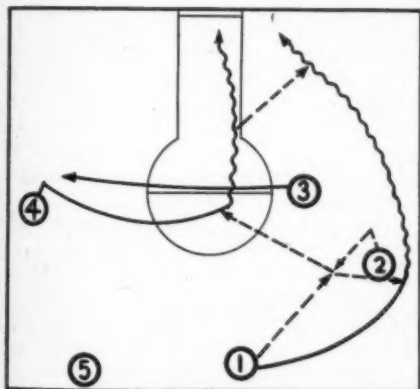
Our passer is taught to tip off the center by leading with the ball to the open side, indicating to him the position of his guard and to "go on in, it's open." For additional pass protection, the center keeps his inside foot forward. We have also found that wrist passing in the pivot position is more deceptive and quicker than arm passing.

A good shooting center is the greatest offensive threat in basketball. A good rebounder scores heavily on tip-ins, but if he can also score from sets, dribble-ins and pivots, he is that more valuable.

A tall pivot has a huge advantage in shooting. For example, all he need do is turn, lean away from his guard and shoot off the fingertips. This shot is accurate from distances of 25 feet. Art Hillhouse, the great center on L. I. U's crack fives of a few years back, was murder with this lean-away shot.

For the regular turn shot off the pivot, the center should hold the ball far away from his body and step wide to the side. The ball is released with a wrist flip that makes it perhaps the toughest shot of all to stop.

The shot is usually preceded by a fake or a double fake. The shooter may fake upward with the ball and head, in an effort to raise the guard, thus leaving the faker free to swing wide for the shot. Or he may fake the ball and body to the side, and come back to the other side for the shot. Combinations of these may be used to advantage after the defensive center wises up.



Diag. 4

After shooting a few times, it may be smart to fake the shot and dribble through.

Here is a good smart trick that will fool most guards: Pivot sharply to the left as if to dribble in on that side. This will pull the guard over in that direction.

Once the body is turned (facing the basket), cross-step deeply to

the left with the right foot; then dribble in hard with the left hand. This will put the body between the man and the ball. If there is any room at all, the dribble will result in a score.

Diags. 3 and 4 illustrate how the center may be used to advantage on screen plays. A wide stance, enabling the center to take advantage of his size, is a point no coach should overlook in the development of these plays.

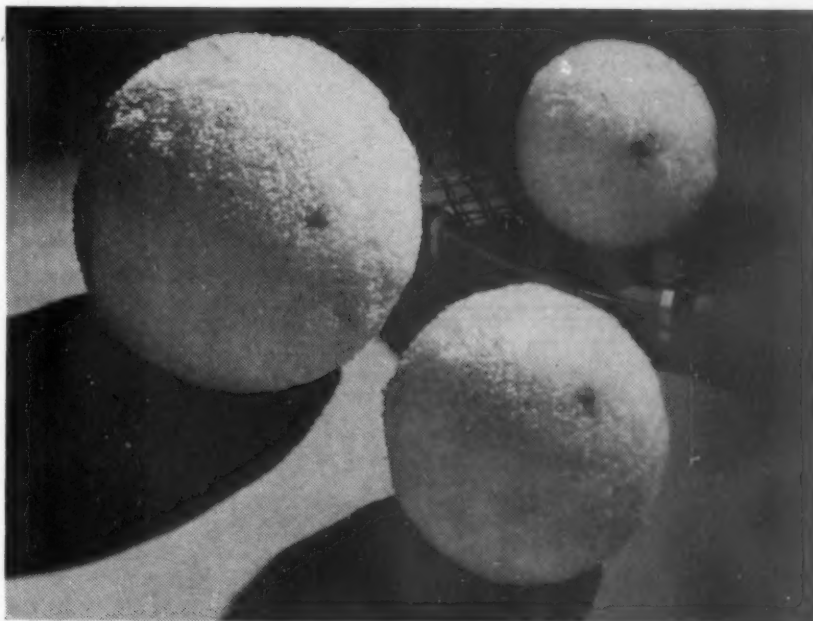
In Diag. 3, No. 1 passes to the center (3) and drives in for a return pass. If he is free, he gets it. Usually, however, he will not shake loose. Then the strong option may

be exercised. It is a scissors with 2 faking and coming in behind 1, running his man into XI.

Diag. 4 uses the center, 3, as an inside screen on the opposite side of the ball. If 1 follows his pass to 2, No. 3 screens. If 1 does not follow, the center waits for a pass. No. 2 has two alternatives; he may pass to 1 or whip the ball to 4. The latter may go in for the shot or pass to 1.

The thought to keep uppermost in developing a center is to teach him to do everything the other players do. This coupled with his size advantage, ought to pay high dividends.

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The book, which is plastic-bound, is nicely organized and illustrated. Particularly outstanding in the way of illustrations is a series of free-line drawings based on moving picture sequences.

BASKETBALL OFFICIATING. By Dave Tobey. Pp. 74. Illustrated—photographs and diagrams. New York: A. S. Barnes & Co. \$1.

AS FAR as we know this is the first text on basketball officiating ever published. And it's a dandy. For the author is one of the greatest officials who ever blasted a whistle. Although but a shade over 40, Mr. Tobey elected to retire a few seasons back and now devotes all his time to physical education work at De Witt Clinton High School in New York City.

Mix this experience-rich background well and you get a practical book like *Basketball Officiating*. The erstwhile whistle tooter doesn't miss a trick. He covers both the single and the double referee systems thoroughly. He shows exactly how to watch the play—giving positions and stances—how to follow the play, how to call it, and how to administer the decision.

Situations covered are screening, fast take-outs, the bucket, dribbling, rebounds, out of bounds, jump balls, shooting, and the free throw. All the ramifications of these situations are covered, including very expert advice on violations and fouls to look for.

Not all games are played on regulation courts, so the author devotes a chapter to calling 'em on non-regulation courts. He outlines the un-

usual conditions that may be encountered and how to meet them.

He also offers chapters on conditioning and equipment; ratings, game relationships (with coach, with player, with spectator), ethics; principles and time elements; and an unusually helpful collection of do's and don'ts.

The book is illustrated with shots from famous intersectional college games and with special single action and moving picture sequences. At a buck, the book is definitely a best buy.

BODY POISE. By Dr. Walter Truslow. Pp. 312. Illustrated—photographs and drawings. Baltimore: The Williams & Wilkins Co. \$4.50.

GOOD body poise is one of the prime objectives of physical fitness. To attain this objective, you need a thorough knowledge of the anatomy and kinesiology of the body, as well as a fine grasp of its practical application to muscular insufficiencies. Dr. Truslow's volume offers an excellent course of study along these lines.

The book is divided into three sections. Part I deals with the normal anatomy and kinesiology—the bone, joint and muscle relationship—of good posture. The anatomy is presented as an "up building," from the soles of the feet to the crown of the head, of the structures necessary for maintaining and using the human frame in normal posture.

Under kinesiology, the text explores occupational and gymnastic variations from the normal posture and the changes in the mechanisms which produce these variations. Herein are studied the anatomy, kinesiology and leverage principles of fundamental gymnastic positions.

Part 2 emphasizes and organizes, in an orderly form, certain remedial exercises for common conditions such as weak feet, flat feet, metatarsalgia, faulty posture (functional anteroposterior and lateral deviations of the spine) and scoliosis. All these corrective exercises require little, if any, gymnastic apparatus and are, therefore, suitable for use in the equipped gymnasium; they may be practiced, after initial training under supervision, at home.

Some leading sports and games, in their relationship to body poise, are presented in Part 3. Six sports—swimming, crew rowing, golf, boxing, baseball, and pole vaulting—are defined, with full kinesiological analyses, with notation as to their relationships to body poise, and with suggestions concerning methods of counteracting faulty tendencies. Twenty-one other sports are touched upon but not analyzed.

The treatise does not specifically detail basic training for athletic events. Its purpose, rather, is to offer a kinesiological approach to sports, with authoritative emphasis on those sports that are beneficial and on those which tend toward uneven and asymmetric physical development—and with suggestions as to counteracting bad trends.

JUDO (Enlarged Edition). By T. Shozo Kuwashima and Ashbel R. Welch. Pp. 146. Illustrated—photographs. New York: Prentice-Hall, Inc. \$1.89.

SINCE Kuwashima and Welch put out their book five years and seven big printings ago, judo, or jiu-jitsu, has achieved enormous popularity. Thanks to the war, it is now a leading individual sport. Our Rangers, the Commandos, every fighting unit, are weaned on jiu-jitsu; if not in its esthetic form then in a rough-and-tumble variation.

The sport is also being taught in all our Army and Navy specialized training colleges, in home-guard units, and in many of our high schools. In the Japanese secondary schools, it is a required course! The training is invaluable for fighting without weapons, or for fighting against weapons without weapons.

For their book, the authors have selected only those movements which can be mastered by the average individual; movements that can be executed with but a small expenditure of strength and without previous training or experience.

There are 41 lessons on fundamentals, action and throwing movements, with each lesson illustrated by a full page of photographs. The pictures are arranged on every left-hand page. The corresponding explanatory text, organized in caption form, appears on the facing page. This arrangement makes the lessons simple to follow. All in all there are 180 illustrations.

The enlarged edition contains 11 new lessons of particular value in the training of soldiers. However, the movements are intended both for recreation and for use in actual hand-to-hand combat.

Judo is a nicely turned-out job, attractively bound and now sells for about two-thirds of its former price.

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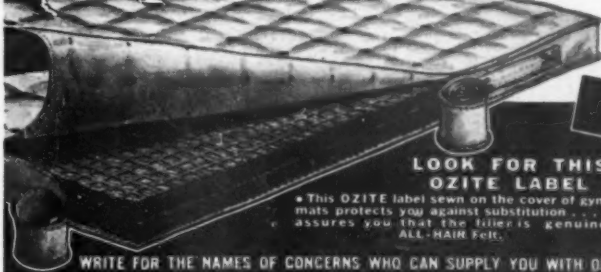
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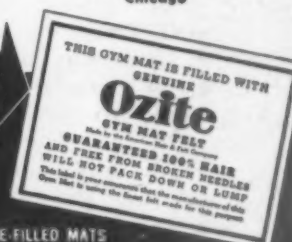
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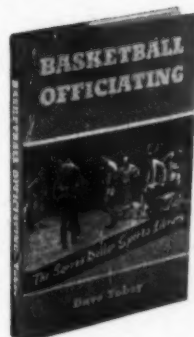
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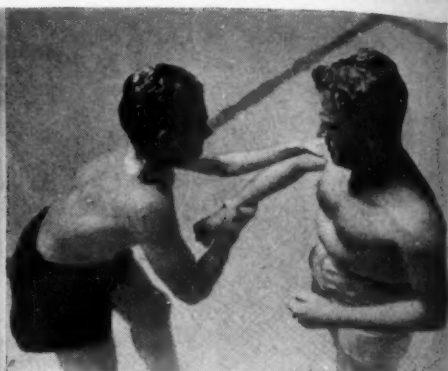
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LIFE-SAVING

This is the second of two articles on lifesaving techniques by Charles E. Silvia, director of aquatics at Springfield College. In his installment last month, Mr. Silvia covered non-swimming assists, swimming assists and approaches.

THE best all-round carry for lifesaving is the cross-chest. It is easily learned and can be used to good advantage with passive and struggling subjects.

When using this carry, the rescuer should be careful to swim with his upperside in contact with the subject's spinal column.

He may swim on either side, using the shallow arm pull and either the regular or reverse scissors kick.

The upper arm is placed diagonally downward across the subject's chest, with the hand contacting the side of the subject's chest at a point several inches below his armpits. Care should be taken to see that the rescuer's armpits rest snugly on the subject's shoulder. Otherwise, a tight carry cannot be maintained. If the subject is struggling, the rescuer should exert downward pressure with his arm to insure a snug but not constricting hold.

It is impossible to hold a violently struggling subject with a cross-chest carry. But even though such a subject will rarely be encountered it is good watermanship to know what to do. The control carry previously described enables the rescuer to prevent the subject from twisting away.

Another carry which is very fast and, therefore, particularly suitable with a passive or unconscious subject, is the hair carry. As the name implies, the rescuer grasps the subject by the hair and tows him to safety. When using this carry, the rescuer should get a secure grasp by quickly running his fingers upward through the subject's hair,

By Charles E. Silvia

Water wrestling is fun, as you may see from the above. Left, a pinning hold (strangle and scissors); center, control position and scissors for pinning hold; right, the referee's position. Rules may be found on next page.

hooking him just above the forehead and holding on tightly. He should not attempt to hold up the subject's head; he should concentrate, rather, on keeping his towing arm straight and swimming smoothly.

It is possible to use the hair carry directly from the front approach, or the rescuer may prefer employing the chin tow as an intermediate step. This carry may also be used with the rear approach; in any case it is important to maintain a vigorous leg action.

A third carry, which is more difficult for the average lifesaver, is the head carry. To perform this carry efficiently, the rescuer must be able to swim strongly with the legs alone. This is necessary because both of his hands are occupied in holding up the subject's head. This carry is quite popular with lifesavers who have a powerful inverted breast stroke kick. As a rule, however, the reverse scissors is the most efficient kick.

The hands, for this carry, are placed on either side of the subject's head, with the heels of the hands in contact with the subject's ears, the thumb on his forehead, and the fingers extended along his jaw. The rescuer may keep his elbows slightly flexed, but he should avoid alternately flexing and extending them.

If the drowning person is wearing a shirt, coat, or jacket, the res-

TECHNIQUES

cuer may grasp the subject's collar and tow him. He may do this directly from a rear approach or, if a front approach is used, grasp the collar after turning the subject over onto his back.

Most swimming rescues consist of an approach, a carry, and subsequent treatment for shock. Contingencies may arise, however, calling for a knowledge of defensive tactics to avoid the grasp of a frantic subject. This may occur during a front approach, during an approach to a tired swimmer, or following the sudden overturning of an overloaded liferaft or lifeboat.

Such training teaches the prospective lifesaver the value of speed and aggressiveness. When avoiding the clutches of a frantically struggling person, unless he acts quickly and powerfully, the rescuer may find himself confronted with the much more serious problem of effecting a release.

The rescuer may use any of several methods to protect himself. If the drowning person is not too powerful, the rescuer may use a technique known as "the block and carry." This technique consists of the use of a straight arm to the subject's chest to keep him at arm's length and then using the free hand, either the right or the left, with the thumb on the inside, to grasp the subject's left arm just above the elbow, and turn him around vigorously by crossing the arm in front of the chest. The rescuer then uses the chin tow with his free hand in preparation for a carry.

If the rescuer has to use a purely defensive measure, due to the size and strength of the subject, this does not mean that the rescuer should allow the subject to drown; he should break away in order to determine the best approach.

If an overloaded lifeboat or life-

raft should suddenly tip over, upon returning to the surface the rescuer may find himself close to a wildly thrashing person who will attempt to grab him. The rescuer must act quickly and vigorously to protect himself. The quickest and most effective action is a powerful two-hand push against the subject's chest, at the same time flexing the neck to force the subject's arm to slide off the head.

Another method is to keep the head up and block the subject's arms, combining this with an occasional one-hand push against his face, as in boxing, although no effort is made to injure him.

Or the rescuer may wish to combine a defensive action with one that will put him in position to carry the subject to safety. For this, he may use a technique known as the pivot parry. The pivot parry depends upon the rescuer's ability to grasp with his right hand the subject's left arm just above the elbow, or vice versa, when the subject grabs at the rescuer's head. The rescuer then turns vigorously around, at the same time flexing his neck quickly to free the subject's arms more easily. After turning the subject, he uses the chin tow and then an appropriate carry.

Although this technique may be adequate, it is also well for the rescuer to be familiar with several modifications. Instead of attempting to grasp one of the subject's arms, he may move in close with his head down, to present a small target. He then drives both hands quickly upward under the subject's armpits to serve as a brace, quickly moves under either arm to the rear of the subject, and applies the control carry. This technique works quite successfully, even when anticipated.

It is also well for the trained lifesaver to be able to protect himself from attack from the rear. The technique is called the rear pivot

breakaway. It is simple and relies entirely upon speed of movement and aggressiveness.

As the subject attempts to grasp the rescuer's head, the rescuer twists around to face the subject and uses a vigorous two-hand push against his chest. Since the method of twisting is very important, the rescuer must learn to turn first his head and then his shoulders, accompanied by a quick movement of the arms.

The need for some of these techniques may never arise, but if a prospective lifesaver can develop the three assets of breath control, speed of movement, and aggressiveness, he is well prepared to protect himself in all unusual situations.

The releases

Whenever a rescuer is called into action, he is confronted with the possibility of a tight hold on his head, arms, or body. Although the trained lifesaver, who is constantly aware of this danger, seldom finds it necessary to use a release technique, training in release methods is necessary in preparing prospective life-savers for all eventualities.

If he is to cope successfully with unusual situations, the rescuer must know the correct release methods for the single or double grip on one arm, the front head hold with or without body scissors, and the rear head hold. Although other holds may be encountered, the release methods from these three holds are fundamental and apply to other situations.

While the prospective life-saver is learning the release techniques, he should always be cognizant of the importance of breath control, water agility, and aggressiveness. Watermanship is based on these three fundamentals, and no one can be considered proficient in the water unless he has mastered all.

A thorough knowledge of release

WATER WRESTLING

WATER WRESTLING serves as an excellent conditioner, as well as a constant reminder of the importance of breath control, agility and aggressiveness. Rules are necessary, however, to produce the desired results. Here is a good code: (1) Wrestling must be confined to circle six feet in diameter. Penalty is loss of fall. (2) Match consists of two out of three falls. (3) Referee starts contest with command, "Wrestle!" (4) Referee's position consists of application by No. 1 of double grip on either opponent's arm while both are treading water. Grip must be maintained until opponent makes contact. (5) Fall occurs when either man holds opponent securely with control carry, regular strangle hold, front underarm strangle, or tires him out within 30-second limit. (6) Either man may acknowledge fall by ceasing to resist. (7) Rest period of one minute between falls. (8) If match requires three falls, referee's position for last fall decided by choosing.

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methods is particularly important during wartime. Desire to help a tired comrade may result in the necessity of releasing a grip on an arm, or even of releasing oneself from a front head hold and body scissors. Occasions may arise when it is necessary to protect oneself in the midst of a group of struggling comrades who are frantically grabbing any means of support.

Release from a single grip on one or both arms may be readily accomplished by quickly moving the arm or arms against the subject's thumbs. To release a double grip on one arm, efficient leverage must be employed; this is very effective when the subject is in the proper position.

If the subject grasps the rescuer's right wrist with both hands, the rescuer in turn grasps the subject's left wrist with his left hand and forces the subject beneath the surface. Then he quickly places his left foot on the subject's right shoulder and simultaneously pushes with his foot and pulls with his hand. This movement causes the subject to lose his grasp on the wrist and the rescuer may then proceed as he would with a front approach.

Staying above water

Another method which can be used, no matter how the subject grasps the rescuer's arm, is to stay above the surface while holding the subject under water. For example, if the subject grasps the rescuer's right arm the rescuer pulls vigorously and swings his left arm around the subject's neck, forcing him under water, but not choking him. The subject may be held under water until he releases his grip, following which the rescuer, by moving quickly to the rear and applying the control carry, can prevent the subject from twisting away.

Methods of releasing the front head hold, with or without body scissors, are numerous. One well-known technique consists of placing the right hand on the subject's right cheek or vice versa, and shoving strongly while pushing the subject's left arm upward over the head with the left hand. As the rescuer does this, he turns the subject around and proceeds as he would with the rear approach.

Another technique, known as the "press-away" or "push away" release, consists of pushing against the subject's hips and forcing him into a horizontal position, thus causing him to release his hold. It is im-

portant for the rescuer to duck his head, just as the subject takes hold, to allow the latter to grasp only the back of his head. After the hold has been released the rescuer should turn the subject over onto his back and proceed as he would from the rear approach.

Some instructors advocate that, when performing a release, the rescuer submerge with the subject, because there is a possibility that a drowning person will try to remain on the surface and consequently will let go. Although the second technique described has merit, the writer strongly advocates the use of the two-hand method as the most effective way to release a front head hold, with or without body scissors.

Confronted with the need to release a front head hold, the rescuer should not permit the subject to push him down or get above him in any other way. If the rescuer is to release the hold most effectively, both he and the subject must be on the same plane. In addition the rescuer must stay out of the vertical position and make every effort to get into a diagonal or horizontal position. This is best accomplished by swimming breast stroke vigorously before making any attempt to release the hold.

Two-hand method

If the rescuer has acted to the best advantage, he can release several types of holds by the two-hand method whether or not the subject has secured a body scissors. If the subject has secured a tight hold plus body scissors, and he has his head over the rescuer's shoulder, the latter is faced with a most difficult problem. Under these conditions the subject's head must be forced back to permit the use of both hands on his face. This is best accomplished by grasping his hair with one hand and using the other hand on his face. A vigorous yank on the hair and push against the face will cause the subject's neck to bend backward and allow the use of both hands on his face.

If the subject does not have sufficient hair, the rescuer will have to slide one hand between his face and that of the subject and bend the subject's neck backward with both hands. Once the subject's neck has been bent backward, the rescuer must be particularly careful to keep his own neck hyperextended to facilitate breathing while holding the subject's head under water. The rescuer should continue to ex-

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(Numbers in parentheses denote page on which advertisement may be found)

**ON PAGE 48 OPPOSITE THIS SPACE ARE
OTHER LISTINGS AND FORM FOR SIGNATURE**

ert pressure against the subject's face and to bend his neck to the point where he must loosen his hold or suffer an injured neck.

If the rescuer is able to keep his head above water and the subject's head under water the outcome will not be in doubt. However, if the subject and rescuer lack sufficient buoyancy, or if the rescuer does not kick vigorously enough to keep his head above the surface, he will not enjoy the advantage of regular breathing. It is evident, therefore, that the rescuer must keep his neck hyperextended so that he can breathe if his head comes above the surface.

Another release

Release may also be effected by holding the subject's head back with one hand, at the same time quickly ducking one's own head and pushing upward on the subject's arms. This latter move will cause the subject's arms to slide over the rescuer's head, and the rescuer is then ready to cope with the leg scissors. This is best done by holding the subject under water until he must let go with his legs. As soon as the subject's legs have

loosened sufficiently, the rescuer should quickly move to the rear and apply the control carry to prevent the subject from twisting away.

The methods for releasing a rear head hold, with or without body scissors, are also numerous. Of all the methods the only one which can cope with the leg scissors is the "rear pivot" release. In principle this release is similar to the "rear pivot breakaway" which is explained under Defensive Tactics.

This release is employed when the rescuer is grabbed around the head by the subject. The rescuer should be careful to turn his head left or right to avoid the rear strangle hold, and as soon as contact is made start turning toward the subject. Even when the head is held securely by the subject, it is possible to turn around because the neck has a range of movement of approximately 180°.

As the rescuer turns around, he uses his hands to prevent the application of body scissors by the subject. Because he is usually below the level of the subject, he cannot use the two-hand release. Instead he should use a modification of the "push away" release, which

consists of pushing the subject's body towards the surface and then quickly shifting the hands of the subject's arms and pushing them off over his head. As soon as the rescuer's head is free, he should move quickly under either arm of the subject and apply the control carry.

Second method

In another method which is widely taught but which leaves the rescuer vulnerable to the body scissors hold, the rescuer protects his neck by dropping his chin and applying leverage on the subject's lower arm. For example, if the subject's right arm is underneath, the rescuer grasps the subject's right wrist with his left hand and the subject's right elbow with his right hand. He then twists the subject's wrist inward, pushes upward on his elbow, ducks under his right arm and moves the subject's arm into the hammer lock position. The rescuer then grasps the subject's chin with his right hand and proceeds as he would with the rear approach.

Double rescue

Release for two people locked together may be accomplished by pushing with one or both feet against the first rescuer's chest while pulling on the subject's chin with both hands. If still conscious, the first rescuer will be endeavoring to twist away, so his efforts will help the second rescuer. The second rescuer should be careful not to kick when pushing against the first rescuer because it is not always possible for him to place his foot or feet on the first rescuer's chest.

If the distance to safety is less than thirty feet, the rescuer may choose to tow both people by using the chin carry, hair carry, or collar carry. Towing two people locked together is a difficult task so the rescuer should be ready to expend considerable energy.

All release techniques should incorporate the principles of body position, leverage, reaction, and muscle action. More time should be devoted to the understanding of these principles and less to the perfection of form. It is the writer's opinion that the prospective life-saver should become highly skilled in the execution of three basic techniques: (1) release for double grip on one arm, (2) release for front head hold and body scissors, and (3) rear pivot release. The life-saver who has mastered these techniques is well equipped to protect himself.

SCHOLASTIC COACH MASTER COUPON

(See page 47 for other listings)

(Numbers in parentheses denote page on which advertisement may be found)

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- See p. 35 for Entry Blank

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